

R E P O R T R E S U M E S

ED 016 498

LI 000 085

SURVEY OF TEXTS AND INSTRUCTIONAL MATERIAL USED IN
INFORMATION SCIENCE PROGRAMS.

BY- BRACKEN, MARILYN C.

GEORGE WASHINGTON UNIV., WASHINGTON, D.C.

REPORT NUMBER BSCP-COMMUN-27-67-NOV-1967 FUB DATE NOV 67

EDRS PRICE MF-\$0.50 HC-\$2.68 65P.

DESCRIPTORS- *INSTRUCTIONAL MATERIALS, *INFORMATION SCIENCE,
BIBLIOGRAPHIES, TEXTBOOKS, INTERNATIONAL FEDERATION OF
DOCUMENTATION

A SURVEY WAS MADE AT THE REQUEST OF THE COMMITTEE ON
TRAINING OF DOCUMENTALISTS OF THE INTERNATIONAL FEDERATION
FOR DOCUMENTATION TO DETERMINE WHAT MATERIALS WERE BEING USED
IN UNIVERSITY COURSES IN THE AREA OF INFORMATION SCIENCE AND
REQUIRED CORE COURSES IN INFORMATION SCIENCE PROGRAMS IN THE
UNITED STATES. A BIBLIOGRAPHY, INCLUDING BOOKS, JOURNAL
ARTICLES AND OTHER TEXTUAL MATERIALS, WAS PREPARED FROM
INFORMATION SUBMITTED BY 34 RESPONDENTS. OF ALL TYPES OF
MATERIALS, BOOKS AND JOURNAL ARTICLES WERE MOST COMMON, EACH
ACCOUNTING FOR ABOUT ONE-THIRD OF THE REFERENCES. CITATIONS
FROM TWO JOURNALS, "AMERICAN DOCUMENTATION" AND "JOURNAL OF
CHEMICAL DOCUMENTATION," MAKE UP OVER HALF OF THE JOURNAL
ARTICLES, AND MATERIAL PUBLISHED IN 1965 NUMBERS OVER 20
PERCENT OF THE TOTAL. THE BIBLIOGRAPHY OF 463 REFERENCES IS
ARRANGED BY MAIN AUTHOR, AND AN AUTHOR INDEX AND PERMUTED
TITLE INDEX IS FURNISHED. A LIST OF RESPONDENTS TO THE SURVEY
IS ALSO GIVEN. (CM)

ED016498

LI 000 085

27-67 November 1967

BIOLOGICAL SCIENCES COMMUNICATION PROJECT

communiqué

University, Suite 700, 2000 P Street, N.W., Washington, D.C. 20036, 462-5828

SURVEY OF TEXTS AND INSTRUCTIONAL
MATERIAL USED IN INFORMATION SCIENCE PROGRAMS

LI 000 085

The BSCP COMMUNIQUE is published by the Biological Sciences Communication Project of The George Washington University. It is issued on an unscheduled basis and appears as a reporting medium for the activities of this project.

The present survey of texts and instructional material used in Information Science Programs was conducted as an on-the-job project under the National Library of Medicine Grant Number 1 T1 LM 101-01A1.

SURVEY OF TEXTS AND INSTRUCTIONAL
MATERIAL USED IN INFORMATION SCIENCE PROGRAMS

by

Marilyn C. Bracken

Biological Sciences Communication Project

of

The George Washington University

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE
PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS
STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION
POSITION OR POLICY.

FOREWORD

All of the graduate students supported by the National Library of Medicine Grant at the Biological Sciences Communication Project have special areas of interest in which they work for the on-the-job experience part of the education and training program in information science.

In the case of the author of this report the area of interest covers all aspects of formal education and training of information scientists in the United States. Her studies have led to two previous reports in this series:

Education and Training of Information Specialists in the U.S.A., BSCP Communique 24-66, May 1966.

Survey of Practical Training in Information Science, BSCP Communique 25-67, April 1967.

Charles W. Shilling, M.D.
Director, BSCP

CONTENTS

	<u>Page</u>
FOREWORD	i
LIST OF TABLES	iv
I. DESCRIPTION OF SURVEY AND SUMMARY OF RESULTS	1
II. CITATIONS	5
III. AUTHOR INDEX	33
IV. PERMUTED TITLE INDEX	38
V. RESPONDENTS	57

LIST OF TABLES

1. Distribution of Text Material by Type of Publication
2. Distribution of Journal Articles by Journals of Appearance
3. Distribution of Text Material by Date of Publication

I. DESCRIPTION OF SURVEY AND SUMMARY OF RESULTS

This survey was conducted in response to a request by the Committee on Training of Documentalists of the International Federation of Documentalists (FID/TD). Approximately 40 universities were contacted, of which 34 responded. The purpose of the survey was to determine which books, journal articles, and other textual materials were being used in university programs and courses in information science in the United States. Most of the respondents furnished bibliographies used in their courses. Most of the courses were in graduate degree programs, particularly in information science. All of the responses were furnished with the approval of the cognizant dean or department head. A complete list of the responding universities is included.

The range of the material was quite diverse, as are the various programs. An effort was made to include only material that was used in courses in the area of information science, plus material from required core courses in information science programs except introductory courses in librarianship. Examination of the bibliography reveals the diversity of the material covered in the courses, clearly indicating the interdisciplinary nature of information science. The bibliography could be considered to identify those topics which define the range of information science, insofar as that range is exemplified in curricula.

There are 463 references in the bibliography, arranged alphabetically by author. A classification system was not established for the material since the sources were so widely varied. A separate author index is presented, including joint authors. For ease in subject searching, an extensive permuted title index is given to aid in locating citations by keywords found in the

titles. When appropriate, titles have been expanded by adding index terms relating the titles to the subject matter discussed in the documents.

Most participants responded that their programs were of a dynamic nature, with continual curriculum changes and introduction of new course materials. It is of value to mention that two books were used by virtually all of the universities: Becker and Hayes, Information Storage and Retrieval, Wiley, 1963, and Cuadra, Annual Review of Information Science and Technology, Interscience, 1966. Various IBM procedures manuals were used extensively. Frequency of use of selected journal articles was also quite high, with several respondents noting that such material incorporates the latest techniques, ideas, and equipment utilization. Exact tabulations of frequency of use of the 463 references would probably be useful, but has not been done here.

Statistical Data on Survey Results

Table 1 presents the distribution of textual material by type of publication. Books and journal articles accounted for 71.3 percent of the references. Technical reports, such as government reports, university reports, industrial manuals and reports, and professional society publications accounted for 16.7 percent. Articles in proceedings accounted for 12.0 percent.

Type of Material	Occurrences	Percent
Books	175	37.8
Journal Articles	155	33.5
Technical Reports	77	16.7
Articles in Proceedings	56	12.0
	<u>463</u>	<u>100.0</u>

Table 1. Distribution of Text Material by Type of Publication

Table 2 presents the distribution of journal articles by the journals in which they appeared, for the nine journals with the greatest frequency of appearance. Of the 155 journal articles in the bibliography, 37.4 percent were from American Documentation, 16.1 percent from the Journal of Chemical Documentation, 7.1 percent from Science, 14.6 percent from the following six journals and 24.9 percent from thirty other journals.

Journal	Occurrences	Percent
American Documentation	58	37.4
Journal of Chemical Documentation	25	16.1
Science	11	7.1
Special Libraries	5	3.2
Aslib Proceedings	4	2.6
Journal of Association for Computing Machinery	4	2.6
Journal of Documentation	4	2.6
Scientific American	3	1.9
International Science and Technology	3	11.9
All Others	38	24.9
	<u>155</u>	<u>100.0</u>

Table 2. Distribution of Journal Articles by Journals of Appearance

Table 3 presents the distribution of textual material by date of publication, for all textual material, and classified by type of textual material. The

extent of the peak which occurs in 1965 for all four classifications of reference material is surprising. There is also a significant increase in the period 1964-1966 in cited published material from the period 1961-1963.

Date of Publication	All Material	Books	Journal Articles	Technical Reports	Articles in Proceedings
1950 and previous	10	8	2	0	0
1951 - 1955	23	10	8	4	1
1956 - 1960	51	18	18	7	8
1961	42	13	21	5	3
1962	45	17	14	11	3
1963	50	21	20	5	4
1964	59	23	21	8	7
1965	95	33	24	16	22
1966	66	24	19	15	8
1967	22	8	8	6	0
	<u>463</u>	<u>175</u>	<u>155</u>	<u>77</u>	<u>56</u>

Table 3. Distribution of Text Material by Date of Publication

II. CITATIONS

1. ADLER, I. Thinking machines; a layman's introduction to logic, Boolean algebra, and computers. New York, John Day, 1961.
2. AGARD EVANS, A. B., and FARRADANE, J. Training the scientific information officer. Proc. Int. Conf. Sci. Inform. 1958(2):1489-1494. 1959.
3. AINES, A. A. Science, technology, and the library. Spec. Libr. 57: 15-20. 1966.
4. ALSTON, W. P. Philosophy of language. Englewood Cliffs, N. J., Prentice-Hall, 1964.
5. AMERICAN CHEMICAL SOCIETY. Searching the chemical literature. Rev. ed. Washington, D. C., 1961. (Advances in Chemistry Series, No. 30)
6. AMERICAN DATA PROCESSING, INC. Business data processing systems encyclopedia. Detroit, Mich., 1964.
7. AMERICAN DOCUMENTATION INSTITUTE. Automation and scientific communication. Proceedings of the 26th Annual Meeting. Washington, D. C., 1963.
8. AMERICAN DOCUMENTATION INSTITUTE. Parameters of information science. Proceedings of the 27th Annual Meeting. Washington, D. C., 1964.
9. AMERICAN DOCUMENTATION INSTITUTE. COMMITTEE ON ORGANIZATION OF INFORMATION. Report for 1961-1962. Amer. Doc. 14:299-306. 1963.
10. AMERICAN INSTITUTE OF PHYSICS. Three experiments with citation indexing and bibliographic coupling of physics literature. New York, 1962.
11. AMERICAN INSTITUTE FOR RESEARCH. Data flow: the general problem and cognitive model. Pittsburgh, Pa., 1962.
12. AMERICAN TELEPHONE & TELEGRAPH COMPANY. Data communications in business: an introduction. New York, Publishers Service Co., 1965.
13. ANDERSON, D. M. Computer programming FORTRAN IV. New York, Appleton-Century-Crofts, 1966.
14. ANTHONY, R. N. Management accounting principles. Homewood, Ill., Irwin, 1965.

15. ARMED SERVICES TECHNICAL INFORMATION AGENCY. Thesaurus code manual (ASTIA). Alexandria, Va, 1961.
16. ARTANDI, S. The searchers - links between inquirers and indexes. Spec. Libr. 57:571-574. 1966.
17. ARTANDI, S., and HINES, T. C. Roles and links or forward to Cutter. Amer. Doc. 14:74-77. 1963.
18. ASH, R. Information theory. New York, Wiley, 1965. (Interscience Tracts in Pure and Applied Mathematics, no. 19)
19. ATHERTON, P., ED. Proceedings of the Second International Study Conference on Classification Research, Elsinore, Denmark, Sept. 14-18, 1965. Copenhagen, Munksgaard, 1965.
20. ATHERTON, P. and YOVICH, J. C. Study of physics abstracts - abstracting three types of journals. J. Chem. Doc. 4:157-163. 1964.
21. AUERBACH CORP. DOD user needs study. Philadelphia, 1965.
22. AUSTIN, C. The MEDLARS system. Datamation 10:28-31. 1964.
23. AUSTIN, J. L. How to do things with words. Cambridge, Mass., Harvard Univ. Press, 1962.
24. AWAD, E. M. Business data processing. Englewood Cliffs, N. J., Prentice-Hall, 1965.
25. BAGLEY, P. R. Electronic digital machines for high speed information searching. Cambridge, Mass., Inst. Technol., 1951.
26. BAVELAS, A. A mathematical model for group structures. Appl. Anthropol. 7:16-30. 1948.
27. BAR-HILLEL, Y. An examination of information theory. Phil. Sci. 22: 86-105. 1955.
28. BAR-HILLEL, Y. Is information retrieval approaching a crisis? Amer. Doc. 14:95-98. 1963.
29. BAR-HILLEL, Y. Language and information; selected essays on their theory and applications. Reading, Mass., Addison-Wesley, 1964.
30. BAR-HILLEL, Y. Some theoretical aspects of the mechanization of literature searching. Jerusalem, Hebrew Univ., 1960.
31. BAR-HILLEL, Y., and CARNAP, R. Semantic information. In Proceedings of a Symposium on Applications of Communication Theory. London, Butterworth, 1953.
32. BARHYDT, G., and others. The preparation of a thesaurus of education terms. Cleveland, O., Western Reserve Univ., Center Doc. Commun., 1966.

33. BARISH, N. N. Systems analysis for effective administration. New York, Funk and Wagnalls, 1951.
34. BECKER, J., and HAYES, R. M. Information storage and retrieval: tools, elements, theories. New York, Wiley, 1963.
35. BELLO, F. How to cope with information. Fortune 62:162-168. 1960.
36. BELZER, J. Lecture notes 1E 160 - Information Engineering I. Pittsburgh, Pa., Text Dept., Univ. Pittsburgh Book Center, 1967.
37. BERKELEY, E. C., and LOVETT, L. Glossary of terms in computers and data processing. Ed. 5. Newtonville, Mass., Berkeley Enterprises, 1960.
38. BERKELEY SYMPOSIUM. On statistical methods in communication engineering. Transactions I.R.E. Prof. Group on Information Theory. Berkeley, Univ. Calif., 1954.
39. BERNIER, C. L. Correlative indexes. Amer. Doc. 7:283-288. 1956; 8:47-50. 1957; 8:211-220. 1957; 8:306-313. 1957; 9:32-41. 1958; 11:277-281. 1960; J. Chem. Doc. 2:93-102. 1962; 2:117-122. 1962; 4:99-103. 1964; 4:104-107. 1964.
40. BERNIER, C. L. Indexing process evaluation. Amer. Doc. 16:323-328. 1965.
41. BERNIER, C. L. New kinds of indexes. J. Chem. Doc. 1:62-67. 1961.
42. BERUL, L. Information storage and retrieval: a state-of-the-art report. Philadelphia, Auerbach Corp., 1964. (AD630089)
43. BEYER, T. G., and WEKSEL, W. The structure and psychology of language. New York, Holt, Rinehart and Winston, Inc.
44. BLOOMFIELD, L. Linguistic aspects of science. In International Encyclopedia of Unified Science, Vol. I, No. 4. Chicago, Univ. Chicago Press, 1939.
45. BLOOMFIELD, M. Role of one technical library in support of an information center. Spec. Libr. 57:39-44. 1966.
46. BLUEMLE, A. Automation. Cleveland, World Publ. Co., 1963.
47. BOAZ, M. Modern trends in documentation. Long Island City, N. Y., Pergamon Press, 1959.
48. BOHNERT, L. M. Limits of indexing. In Newman, S. M., ed. Information systems compatibility, p. 127-133. Washington, D.C., Spartan Books, 1965. (American University Technology of Management Series, v. 1)
49. BORKO, H. Automatic language processing: the state of the art. New York, Wiley, 1967.
50. BORKO, H. Computer applications in the behavioral sciences. Englewood Cliffs, N. J., Prentice-Hall, 1962.

51. BORKO, H., and CHATMAN, S. Criteria for acceptable abstracts. A survey of abstracters' instruction. Amer. Doc. 14:149-160. 1963.
52. BOURNE, C. P. Methods of information handling. New York, Wiley, 1963.
53. BOURNE, C. P. Review of the criteria and techniques used or suggested for the evaluation of reference retrieval systems. Summary of Study Conference on Evaluation of Document Searching Systems and Procedures. Washington, Nat. Sci. Found., 1965.
54. BOURNE, C. P. Some user requirements stated quantitatively in terms of the 90 percent library. In Electronic Information Handling, p. 93-110. Washington, D. C., Spartan Books, 1965.
55. BOURNE, C. P., PETERSON, G. D., LEFTCOWITY, B., and FORD, D. Requirements, criteria, and measures of performance of information storage and retrieval systems. Menlo Park, Calif., Stanford Res. Inst., 1961. (Project No. 3741)
56. BRILLOUIN, L. Information & entropy I. J. Appl. Phys. 22:334-337. 1951.
57. BRILLOUIN, L. Physical entropy & information II. J. Appl. Phys. 22:338-343. 1951.
58. BRITISH STANDARDS INSTITUTE. Guide to the Universal Decimal Classification. London, 1963.
59. BRODSKY, G. Abstracting control. In Elias, A. W., ed. Technical Information Center Administration, p. 57-71. Washington, D.C., Spartan Books, 1964.
60. BROOKS, F. P., and IVERSON, K. E. Automatic data processing. New York, Wiley, 1963.
61. BROSIN, H. W. Expressed and unexpressed needs. In Electronic Information Handling, p. 75-84. Washington, D. C., Spartan Books, 1965.
62. BROWN, A. F., and MELCHERT, N. P. Outline and bibliography for a course in syntax. Bethlehem, Pa., Lehigh Univ., Center Inform. Sci., 1965. (Curriculum for the Information Sciences, Report No. 5)
63. BUCKHOLZ, W. Planning a computer system. New York, McGraw-Hill, 1962.
64. BUSAKER, R. G., and SAATY, T. Finite graphs and networks. New York, McGraw-Hill, 1965.
65. CAMPBELL, D. T. Systematic error on the part of human links in communication systems. Inform. Contr. 1:334-369. 1958.
66. CARR, J. W. Better computers. Int. Sci. Technol. 1:1, 23-47. 1962.
67. CARROLL, J. B. Language and thought. Englewood Cliffs, N. J., Prentice-Hall, 1964.

68. CARTER, L. F., and others. National document-handling systems for science and technology. New York, Wiley, 1967.
69. CARTWRIGHT, K. L., and SHOFFNER, R. M. Catalogs in book form. Los Angeles, Univ. Calif., Inst. Libr. Res., 1967.
70. CASEY, R. S., PERRY, J. W., BERRY, M., and KENT, A. Punched cards: their applications to science and industry. New York, Reinhold, 1958.
71. CHAPIN, N. An introduction to automatic computers. Ed. 2. Princeton, N. J., Van Nostrand, 1963.
72. CHERRY, C. Information theory. London, Butterworth, 1961.
73. CHERRY, C. On human communication. Cambridge, Mass., M.I.T. Press, 1957.
74. CHESTNUT, H. Systems engineering tools. New York, Wiley, 1965.
75. CHOMSKY, N. Aspects of the theory of syntax. Cambridge, Mass., M.I.T. Press, 1965.
76. CHOMSKY, N. Current issues in linguistic theory. The Hague, Mouton Co., 1964.
77. CHOMSKY, N. Syntactic structures. The Hague, Mouton Co., 1964.
78. CLAPP, V. W. Closing the circuit: automation and data processing for libraries. Libr. J. 91:1165-1171. 1966.
79. CLAPP, V. W. The future of the research library. Urbana, Univ. Ill. Press, 1964.
80. CLEVERDON, C. Report on the testing and analysis of an investigation into the comparative efficiency of indexing systems. Cranfield, Eng., Coll. Aeronautics, 1962.
81. CLEVERDON, C. The Cranfield hypothesis. Libr. Quar. 35:121-124. 1965.
82. CLEVERDON, C., and MILLS, J. The testing of index language devices. Aslib Proc. 15:106-130. 1963.
83. CLEVERDON, C., MILLS, J., and KEEN, M. Factors determining the performance of indexing systems, Vol. 1, Design, p. 40-57. Cranfield, Eng., Aslib Cranfield Res. Proj., 1966.
84. COATES, E. J. Scientific and technical indexing. Indexer 5:27-34. 1966.
85. COATES, E. J. Subject catalogues. Libr. Ass. Rec. 62:80-98. 1960.
86. COBLANS, H. Use of mechanized methods in documentation work. London, Aslib, 1966.

87. COHAN, L., and CRAVEN, K. Science information personnel: the new profession of information combining science, librarianship and foreign language. New York, Mod. Lang. Ass. Amer., 1961.
88. COHEN, M. R., and NAGEL, E. An introduction to logic and scientific method. New York, Harcourt, 1934.
89. COHEN, S. M., LAUER, C. M., and SCHWARTZ, B. C. An evaluation of links and roles as retrieval tools. J. Chem. Doc. 5:118-121. 1965.
90. COLE, R. E. Data/information availability. Washington, D. C., Thompson Book Co., 1966.
91. CONTE, S. D. Elementary numerical analysis. New York, McGraw-Hill, 1965.
92. COOPER, W. S. Automatic fact retrieval. Sci. J. 11:81-86. 1965.
93. COPI, I. M. Symbolic logic. New York, Macmillan, 1965.
94. COSTELLO, J. C., JR. A basic theory of roles on syntactical control devices in co-ordination. J. Chem. Doc. 4:116-117. 1964.
95. COSTELLO, J. C., JR. Co-ordinate indexing. New Brunswick, N. J., Rutgers St. Univ. Grad. Sch. Libr. Serv., 1966.
96. COSTELLO, J. C., JR. Some solutions to operational problems in concept co-ordination. Amer. Doc. 12:191-197. 1961.
97. COSTELLO, J. C., JR. Storage and retrieval of chemical research and patent information by links and roles in Dupont. Amer. Doc. 12:11-120. 1961.
98. COSTELLO, J. C., JR. Uniterm indexing principles, problems and solution. Amer. Doc. 12:20-26. 1961.
99. COX, N., DEWS, J. D., and DOLBY, J. L. The computer and the library: the role of the computer in the organization and handling of information in libraries. Hamden, Conn., Shoe String Press, 1966.
100. CRANE, E. J., and LANGHAM, C. C. On-the-job training at Chemical Abstracts Service. J. Chem. Doc. 2:199-204. 1962.
101. CUADRA, C. A., ED. Annual review of information science and technology, Vol. 1, 1966. New York, Intersci. Publ., 1966.
102. DAVIS, G. B. An introduction to electronic computers. New York, McGraw-Hill, 1965.
103. DELUCIA, A. Index-abstract evaluation and design. Amer. Doc. 15:121. 1964.
104. DENNIS, B. K., and others. Five operational years of inverted index manipulation by an electronic computer. J. Chem. Doc. 2:234-242. 1962.

105. DENSMORE, G., and BOURNE, C. A cost analysis and utilization study of the Stanford University library system. Palo Alto, Calif., Stanford Univ. Libr., 1965.
106. DEWEY, H. An introduction to library cataloguing and classification. Madison, Wis., Capital Press, 1957.
107. DIMITRY, D., and MATT, T. Introduction to FORTRAN programming. New York, Holt, Rinehart and Winston, 1966.
108. DOCUMENTATION INCORPORATED. Application of the uniterm system and the association of ideas to a special library file. Washington, D. C., 1955. (Technical Report, No. 10)
109. DOCUMENTATION INCORPORATED. Installation manual for the uniterm system of co-ordinate indexing. Washington, U. S. Armed Services Tech. Inform. Agency, 1953.
110. DOCUMENTATION INCORPORATED. State of the art of co-ordinate indexing. Washington, D. C., 1962.
111. DOCUMENTATION INCORPORATED. The mechanization of co-ordinate indexing; Washington, D. C., Office of Naval Res., 1954. (Technical Report, No. 6)
112. DOUGHERTY, R. F., and HEINRITZ, F. J. Scientific management of library operations. New York, Scarecrow Press, 1966.
113. DOYLE, L. B. Indexing and abstracting by association. Amer. Doc. 13:378-390. 1962.
114. DOYLE, L. B. Semantic road maps for literature searchers. J. Ass. Comput. Mach. 8:553-578. 1961.
115. DOYLE, L. B., and BLANKENSHIP, D. A. Technical advances in automatic classification. Proc. Amer. Doc. Inst. 1966:63-71.
116. EBERSOLE, J. L. Operating model of a national information system. Amer. Doc. 17:33-40. 1966.
117. ELDERFIELD, R. C. Notation systems as applied to organic chemistry. Presented before the Division of Organic Chemistry, American Chemical Society, 150th National Meeting, Atlantic City, September 1965.
118. ELIAS, A. W., ED. Technical information center administration. TICA Conference. Drexel Institute of Technology, 1964. Washington, D. C. Spartan Books, 1964.
119. EMIG, J. A., FLEMING, J. T., and POPP, H. M. Language and learning. New York, Harcourt, 1966.
120. ENGINEERS JOINT COUNCIL. Thesaurus rules and conventions. New York.
121. FAIRTHORNE, R. A. Towards information retrieval. London, Butterworth, 1961.

122. FANO, R. M. The transmission of information. Cambridge, Mass., M.I.T. Press, 1949.
123. FANO, R. M., and CORBATO, F. J. Time-sharing on computers. Sci. Amer. 215:129-140. 1966.
124. FELDMAN, J., and FIEGENBAUM, E. A. Computers and thought. New York, McGraw-Hill, 1963.
125. FISCHER, M. The KWIC index concept: a retrospective view. Amer. Doc. 17:57-70. 1966.
126. FISHER, E. L. A checklist for the organization, operation and evaluation of a company library. New York, Spec. Libr. Ass., 1960.
127. FISHER, P. F., and SWINDLE, G. F. Computer programming systems. New York, Holt, Rinehart, & Winston, 1964.
128. FITCH, F. Symbolic logic. New York, Ronald Press, 1952.
129. FITTS, P. M. Perceptual-motor skill learning. In A. W. Melton, ed. Categories of human learning, p. 243-285. New York, Academic Press, 1964.
130. FITZPATRICK, W. H., and MONROE, E. The science information exchange: the evolution of a unique information storage and retrieval system. Libri 15:127-137. 1965.
131. FLORES, I. Computer design. Englewood Cliffs, N. J., Prentice-Hall, 1967.
132. FLORES, I. Computer programming. Englewood Cliffs, N. J., Prentice-Hall, 1966.
133. FLORES, I. Computer software. Englewood Cliffs, N. J., Prentice-Hall, 1965.
134. FODOR, J. A., and KATZ, J. J. The structure of language. Englewood Cliffs, N. J., Prentice-Hall, 1964.
135. FOSKETT, D. J. Classification and indexing in the social sciences. London, Butterworth, 1963.
136. FOSKETT, D. J. Information services in libraries. London, Lockwood, 1958.
137. FOSKETT, D. J. Science, humanism and libraries. New York, Hafner, 1964.
138. FREEMAN, R. Computers and classification systems. J. Doc. 20: 137-143. 1964.
139. FRIEDENSTEIN, H. Alerting with internal abstract bulletins. J. Chem. Doc. 5:154-157. 1965.
140. FRY, B. M. Microprinting fills the bill; Federal Clearinghouse uses the systems approach to microphoto and printing. Bus. Graphics 1:21-25. 1967.

141. GABOR, D. Lectures on communication theory. Cambridge, Mass., M.I.T. Press, 1951.
142. GAINEN, L. A simulation model for data systems analysis. Proceedings of the Eastern Joint Computer Conference. Long Island City, N.Y., Pergamon Press, 1962.
143. GARDIN, J. C. Syntol. New Brunswick, N. J., Rutgers St. Univ. Grad. Sch. Libr. Serv., 1964. (Rutgers Series on Systems for the Intellectual Organization of Information, v. 2)
144. GARFIELD, E. Breaking the subject index barrier - a citation index for chemical patents. J. Patent Office Soc. 39:583-595. 1957.
145. GARFIELD, E. Citation indexes in sociological and historical research. Amer. Doc. 14:289-291. 1963.
146. GARFIELD, E. Science citation index - a new dimension in indexing. Science 144:144-154. 1964.
147. GARFIELD, E., and SHER, I. H. New factors in the evaluation of scientific literature through citation indexing. Amer. Doc. 14:195-201. 1963.
148. GENTLE, E. C., JR. Data communications in business. New York, Publishers Service Co., 1965.
149. GEORGIA INSTITUTE OF TECHNOLOGY. Proceedings of the Conference on Training Science Information Specialists, Oct. 1961, April 1962. Atlanta, 1962.
150. GILLIE, A. Binary arithmetic and Boolean algebra. New York, McGraw-Hill, 1965.
151. GINSBERG, S. Mathematical theory of context - free languages. New York, McGraw-Hill, 1966.
152. GLEASON, H. A. An introduction to descriptive linguistics. New York, Holt, Rinehart and Winston, 1961.
153. GODA, J. J., JR. Introduction to problem solving using the Dummeatron computer (lecture notes series). Atlanta, Ga. Inst. Tech., Sch. Inform. Sci., 1967.
155. GOODE, H. H., and MACHOL, R. E. System engineering. New York, McGraw-Hill, 1957.
156. GORN, S. The computer and information sciences: a new basic discipline. SIAM Review 5:150-155. 1963.
157. GREEN, B. F., JR. Digital computers in research: an introduction for behavioral and social scientists. New York, McGraw-Hill, 1963.
158. GREEN, J. C. The information explosion - real or imaginary. Science 144:646-648. 1964.

159. GREEG, J. R. The language of taxonomy. New York, Columbia Univ. Press, 1954.
160. GREGORY, R. H., and VAN HORN, R. L. Automatic data-processing system: principles and procedures. Belmont, Calif., Wadsworth Publ. Co., 1963.
161. GULL, C. D. Alphabetic subject indexes and co-ordinate indexes: an experimental comparison. Coll. Res. Libr. 14: 276-281. 1953.
162. GULL, C. D. Holes, punches, notches, slots and logic. In R. S. Casey, ed. Punched cards: their application to science and industry, p. 422-431. New York, Reinhold, 1958.
163. GYR, J. W., BROWN, J. S., WILLEY, R., and ZWAN, A. Computer simulation and psychological theories of perception. Psychol. Bull. 65:174-192. 1966.
164. HALACY, D. S. Computers - the machines we think with. New York, Harper and Row, 1962.
165. HALL, A. D. A methodology for systems engineering. Princeton, N. J., Van Nostrand, 1963.
166. HANSON, P. Keypunching. Englewood Cliffs, N. J., Prentice-Hall, 1967.
167. HARMAN, H. Simulation: a survey. Proc. West. Joint Computer Conf. 1961, 1-9.
168. HARVEY, J. Data processing in public and university libraries. Washington, D. C., Spartan Books, 1966.
169. HATTERY, L. H., and McCORMICK, E. M. Information retrieval management. Detroit, Mich., Amer. Data Process., Inc., 1962.
170. HAWKEN, W. R. Copying methods manual. Chicago, Amer. Libr. Ass., 1966. (LTP Publication, No. 11)
171. HAYES, R. The new master of science degree in information science (Documentation) to be given by the School of Library Service, U.C.L.A. In Heilprin, L. B., ed. Proceedings of the Symposium on Education for Information Science, p. 61-66. Washington, D. C., Spartan Books, 1965.
172. HAYKIN, D. J. Subject headings: a practical guide. Washington, U. S. Govt. Print. Off., 1951.
173. HAYS, D. G. Automatic language processing. New York, Amer. Elsevier Publ. Co., 1966.
174. HEILPRIN, L. B. Education for information science: review and orientation. In Heilprin, L. B., ed. Proceedings of the Symposium on Education for Information Science, p. vii-xiv. Washington, D. C., Spartan Books, 1965.
175. HEILPRIN, L. B. On the information problem ahead. Amer. Doc. 12: 6-14. 1961.

176. HEILPRIN, L. B., MARKUSON, B. E., and GOODMAN, F. L., ED. Symposium on education for information science; Airlie House proceedings. Washington, D. C., Spartan Books, 1965.
177. HEMPEL, C. G. Fundamentals of concept formation in empirical science. In International Encyclopedia of United Science, Vol. II, No. 7. Chicago, Univ. Chicago Press.
178. HERNER, S. Deep subject indexing by manual permutation methods. Proc. 26th Ann. Meet. Amer. Doc. Inst. 1963:435-437.
179. HERNER, S. Subject slanting in scientific abstracting publications. Proc. Int. Conf. Sci. Inform. 1958(1):407-427. 1959.
180. HIGHET, G. The art of teaching. New York, Vintage Books, 1950.
181. HILLMAN, D. J. Two models for retrieval system design. Amer. Doc. 15:217-225. 1964.
182. HILTON, AM. M. Logic, computing machines, and automation. Cleveland, Meridian, 1963.
183. HINES, T. C. A critical analysis of links and roles, In Newman, S. M., ed. Information systems compatibility, p. 119-125. Washington, D. C., Spartan Books, 1965. (American University Technology of Management Series, v. 1)
184. HINES, T. C. Salaries and academic training programs for information scientists. J. Chem. Doc. 7:118-120. 1967.
185. HINES, T. C., and HARRIS, J. Computer filing of index, bibliographic, and catalog entries. Newark, N. J., Bro-Dart Found., 1966.
186. HIRAYAMA, K. Length of an abstract and amount of information. J. Chem. Doc. 4:9-11. 1964.
187. HOLM, B. E. Links and roles. In Newman, S. M., ed. Information systems compatibility, p. 103-117. Washington, D. C., Spartan Books, 1965. (American University Technology of Management Series, v. 1)
188. HOLM, B. E., and RASMUSSEN, L. E. Development of a technical thesaurus. Amer. Doc. 12:184-190. 1961.
189. HOLZBAUR, F., and PARKER, E. K. Selective information dissemination by computer-based subject category assignment. Proc. Amer. Doc. Inst. 1966:35-42.
190. HOOPER, R. S. Indexer consistency tests - origin, measurements, results, and utilization. Bethesda, Md., Fed. Sys. Div., IBM Corp., 1965.
191. HOSHOVSKY, A., and ALBUM, H. H. Toward national technical information system. Amer. Doc. 16:313-322. 1965.
192. HOUSTON, N., and WALL, E. The distribution of term usages in manipulative indexes. Amer. Doc. 15:105-114. 1964.

193. HOWERTON, P. W., ED. Information handling: first principles. Washington, D. C., Spartan Books, 1963.
194. HULL, T. E., and DOBELL, A. R. Random number generators. SIAM Review 4:230-254. 1962.
195. HUNT, E. B. Concept learning. New York, Wiley, 1962.
196. INFORMATION DYNAMICS, INC. A methodology for analysis of information systems. Wakefield, Mass., 1965.
197. INSTITUTE FOR SCIENTIFIC INFORMATION. How to submit your interest profile for ASCA. Philadelphia, 1965.
198. INTERNATIONAL BUSINESS MACHINES CORP. An introduction to IBM punched card data processing. White Plains, N. Y., 1962.
199. INTERNATIONAL BUSINESS MACHINES CORP. Basic system study guide. IBM Corporation Manual, No. F 20-8150. White Plains, N. Y.
200. INTERNATIONAL BUSINESS MACHINES CORP. Flowcharting techniques. IBM Corporation Manual, No. C 20-8152. White Plains, N. Y.
201. INTERNATIONAL BUSINESS MACHINES CORP. General information; an introduction to information retrieval. White Plains, N. Y., 1960.
202. INTERNATIONAL BUSINESS MACHINES CORP. General information manual: mechanized library procedures. White Plains, N. Y., 1962.
203. INTERNATIONAL BUSINESS MACHINES CORP. General information manual: selective dissemination of information. White Plains, N. Y., 1962.
204. INTERNATIONAL BUSINESS MACHINES CORP. Introduction to IBM data processing systems. IBM Corporation Manual, No. F 22-6517. White Plains, N. Y.
205. INTERNATIONAL BUSINESS MACHINES CORP. Keyword-in-context index for technical reports. White Plains, N. Y., 1962.
206. INTERNATIONAL BUSINESS MACHINES CORP. Library Mechanization Symposium, Endicott, New York, May 25, 1964. White Plains, N. Y., 1964.
207. INTERNATIONAL BUSINESS MACHINES CORP. Reference manual; index organization for information retrieval. White Plains, N. Y., 1961.
208. IVERSON, K. E. A programming language. New York, Wiley, 1962.

209. JAHODA, G. A. A technique for determining index requirements. Amer. Doc. 15:82-85. 1964.
210. JAHODA, G., OLIVA, J. J., and DEAN, A. J. Recall with keyword from title indexes effect of question relevant document title concept correspondence. Tallahassee, Fla. St. Univ. Libr. Sch., 1966.
211. JAKOBSON, R., FANT, G., and HALLE, M. Preliminaries to speech analysis. Cambridge, Mass., M.I.T. Press, 1952.
212. JASTER, J. J., MURRAY, B. R., and TAUBE, M. The state of the art of co-ordinate indexing. Washington, D. C., Doc. Inc., 1962.
213. JOERGENSEN, J. The development of logical empiricism. In International Encyclopedia of Unified Science, Vol. II, No. 9. Chicago, Univ. Chicago Press.
214. JONES, K. S. Synonymy and semantic classification. Cambridge, Mass., Cambridge Lang. Res. Unit, 1964.
215. JONES, M. H. Executive decision making. Homewood, Ill., Irwin, 1965.
216. JONKER BUSINESS MACHINES, INC. Miscellaneous termatrex reports. Rockville, Md.
217. JONKER, F. Indexing theory, indexing methods and search devices. New York, Scarecrow Press, 1964.
218. JONKER, F. The termatrex inverted 'punched level' systems. Amer. Doc. 11:305-315. 1960.
219. JOYCE, T., and NEEDHAM, R. M. The thesaurus approach to information retrieval. Amer. Doc. 9:192-197. 1958.
220. KARPLUS, W. J. On-line computing: time shared man-computer system. New York, McGraw-Hill, 1967.
221. KATZ, D. L. Information and engineering education. Inform. Retrieval Newslett. 2:3. 1967.
222. KATZ, J. J. The philosophy of language. New York, Harper and Row, 1966.
223. KATZ, J. J., and POSTAL, P. M. An integrated theory of linguistic descriptions. Cambridge, Mass., M.I.T. Press, 1964.
224. KENT, A. Specialized information center. Washington, D. C., Spartan Books, 1965.
225. KENT, A. Textbook on mechanized information retrieval. New York, Intersci. Publ., 1962.
226. KENT, A. Textbook on mechanized information retrieval. Second edition. New York, Intersci. Publ., 1966.

227. KESSLER, M. M. Bibliographic coupling between scientific papers. Amer. Doc. 14:10-25. 1963.
228. KESSLER, M. M. Comparison of the results of bibliographic coupling and analytic subject indexing. Amer. Doc. 16:223-233. 1965.
229. KESSLER, M. M. The M.I.T. technical information project, Physics Today 18:28-36. 1965.
230. KING, G. W. Automation and the Library of Congress. Washington, D. C., Libr. Congress, 1963.
231. KIRIYAMA I., and TEPLITZ, A. Introduction to microfilm systems. Santa Monica, Calif., Systems Develop. Corp., 1964.
232. KNABLE, J. P., II. An experiment comparing keywords found in indexes and abstracts prepared by humans with those in titles. Amer. Doc. 16:123-124. 1965.
233. KNOWER, B. M. Abstract journals and bulletins. J. Chem. Doc. 5: 150-153. 1965.
234. KOCHEN, M. Some problems in information science. New York, Scarecrow Press, 1965.
235. KRAFT, D. H. A total systems approach to library automation with data processing equipment. Chicago, Int. Bus. Mach. Corp, 1966.
236. KRAFT, D. H. A comparison of KWIC indexing of titles with a subject heading classification. Amer. Doc. 15:48-52. 1964.
237. KRICK, E. V. Methods engineering; design and measurement of work methods. New York, Wiley, 1962.
238. KRUZAS, A. T. Directory of special libraries and information centers. Detroit, Gale Research, 1963.
239. KUNEY, J. H. Computers and scientific periodicals. In Automation and electronics in publishing, p. 27-37. Washington, D. C., Spartan Books, 1965.
240. KUNEY, J. H. Economics of journal publication. Amer. Doc. 14:238-240. 1963.
241. LADEN, H. N., and GILDERSLEEVE, T. R. System design for computer applications. New York, Wiley, 1965.
242. LEBLANC, H. Techniques of deductive inference. Englewood Cliffs, N. J., Prentice-Hall, 1966.
243. LE CARBEILLER, P. The language of sciences. Greenwich, Conn., Fawcett Publications, 1963.
244. LEED, J. The computer and literary style. Kent, O., Kent St. Univ. Press, 1966.

245. LEEDS, H. D., and WEINBERG, G. M. Computer programming fundamentals. New York, McGraw-Hill, 1961.
246. LENNEBERG. New directions in the study of language. Cambridge, Mass., M.I.T. Press, 1964.
247. LENOIR, S. P., JR., and others. Digital computer organization and programming (lecture notes series). Atlanta, Ga. Inst. Technol., Sch. Inform. Sci., 1967.
248. LESLIE, P. The current situation in documentation. In Bowker Annual of Library and Book Trade Information, p. 251-255. New York, Bowker, 1967.
249. LEWENZ, G. F., BRENNER, E. H., and ZAREMBER, I. Style and speed in publishing abstracts. J. Chem. Doc. 1(2):48-51. 1961.
250. LIBBEY, M. Second order description for document retrieval. Amer. Doc. 18:10-20. 1967.
251. LICKLIDER, J. C. R. Libraries of the future. Cambridge, Mass., M.I.T. Press, 1965.
252. LICKLIDER, J. C. R. On psychophysiological models. In W. A. Rosenblith, ed. Sensory communication, p. 49-72. New York, Wiley, 1961.
253. LIPETZ, B. Improvement of the selectivity of citation indexes to science literature through inclusion of relationship indicators. Amer. Doc. 16:81-90. 1965.
254. LIPETZ, B. Information storage and retrieval. Sci. Amer. 215:224-232.
255. LISTON, D. M., JR. Information systems. Proc. 8th Ann. Inst. Tech. Ind. Commun. 1966:37-50.
256. LONDON, G. A classed thesaurus as an aid to indexing, classifying and searching. New Brunswick, N. J., Rutgers St. Univ. Grad. Sch. Libr. Serv., 1966.
257. LONG, J. M., BARHARD, H. J., and LEVY, G. C. Dictionary buildup and stability of word frequency in a specialized medical area. Amer. Doc. 18:21-25. 1967.
258. LOUKOPOULOUS, L. Indexing problems and some of their solutions. Amer. Doc. 17:17-25. 1966.
259. LUCE, R. D., BUSH, R., and GALANTER, E. Handbook of mathematical psychology, Vol. II. New York, Wiley, 1963.
260. LUCE, R. D., BUSH, R., and GALANTER, E. Readings in mathematical psychology, Vol. II. New York, Wiley, 1965.

261. LUHN, H. P. A statistical approach to mechanized encoding and searching of literary information. IBM J. Res. Develop. 1:309-317. 1957.
262. LUHN, H. P. Keyword-in-content index for technical literature. Amer. Doc. 11:288-295. 1960.
263. LUHN, H. P. Selective dissemination of new scientific information with the aid of electronic processing equipment. Amer. Doc. 12:131-138. 1961.
264. LUHN, H. P. The automatic creation of literature abstracts. IBM J. Res. Develop. 2:159-165. 1958.
265. LUNIN, L. F. A trace metals, radiobiology, and cancer information retrieval system (tracers). Meth. Inform. Med. 4:120-125. 1965.
266. LUNIN, L. G., and STOVALL, M. Thesaurus for literature analysis in a cancer research institution. Construction and correlation with three national thesauri. Proc. 26th Ann. Meet. Amer. Doc. Inst. 1963:189-190.
267. LYONS, J. Semantic analysis. New York, Oxford, 1963.
268. MACKAY, D. M. Quantal aspects of scientific information. Phil. Mag. 41:289. 1950.
269. MAIZELL, R. E. Continuing education in technical information services. J. Chem. Doc. 7:115-117. 1967.
270. MANDELBROT, B. Contribution a la theorie mathematique des jeux de communication. Publ. Inst. Statist. Univ. Paris 2:1. 1953.
271. MARDEN, E. C. HAYSIAZ: a mechanized system for searching chemical information. Washington, U. S. Govt. Print. Off., 1965.
272. MARKUS, J. State of the art of computers in commercial publishing. Amer. Doc. 17:76-88. 1966.
273. MARKUS, J. State of the art of published indexes. Amer. Doc. 13:15-30. 1962.
274. MARKUSON, B. E. Libraries and automation. Washington, D. C., Libr. Congress, 1964.
275. MARON, M. E. Automatic indexing: an experimental inquiry. J. Ass. Comp. Mach. 8:404-417. 1961.
276. MARTIN, E. W., JR. Electronic data processing: an introduction. Homewood, Ill., Irwin, 1961.
277. MARTYN, J. An examination of citation indexes. ASLIB Proc. 17:184-196. 1965.
278. MARTYN, J. Citation indexing. Indexer 5:5-15. 1966.

279. MARTYN, J., and SLATER, M. Tests on abstracting journals. J. Doc. 20:212-235. 1964.
280. McCANDLESS, R. F. J., SKWEIR, E. A., and GORDON, M. Secondary journals in chemical and biological fields. J. Chem. Doc. 4:147-152. 1964.
281. McCARTHY, J. Information. Sci. Amer. 215:65-73. 1966.
282. McCARTHY, J. LISP 1.5 programmer's manual. Cambridge, Mass., M.I.T. Press.
283. McCLELLAND, R. M. A., and MAPLESON, W. W. Construction and usage of classified schedules and generic features in co-ordinate indexing. Aslib Proc. 18:290-302. 1966.
284. McCracken, D. D., WEISS, H., and LEE, T. Programming business computers. New York, Wiley, 1959.
285. McMILLAN, C., and GONZALEZ, R. F. Systems analysis, a computer approach to decision models. Homewood, Ill., Irwin, 1965.
286. McNEILL, W. I. Effective cost control systems. Englewood Cliffs, N. J., Prentice-Hall, 1965.
287. MEADOW, C. T. The analysis of information systems; a programmer's introduction to information retrieval. New York, Wiley, 1967.
288. MENZEL, H. Review of studies in the flow of information among scientists. New York, Col. Univ., Bur. Appl. Soc. Res., 1960.
289. MERRITT, C. A., and NELSON, P. J. The engineer-scientist and an information retrieval system. New York, IBM Technical Information Retrieval Center, 1965.
290. METCALFE, J. Alphabetical subject indication of information. New Brunswick, N. J., Rutgers St. Univ. Grad. Sch. Lib. Serv., 1965. (Rutgers Series on Systems for the Intellectual Organization of Information, v. 3)
291. METCALFE, J. Information indexing and subject cataloguing: alphabetical: classified: co-ordinate: mechanical. New York, Scarecrow Press, 1957.
292. MEYER, H. A. Symposium on Monte Carlo methods. New York, Wiley, 1956.
293. MILLER, G. A., and CHOMSKY, N. Finitary models of language users. In R. D. Luce, and others, eds. Handbook of mathematical psychology, vol. II, p. 419-492. New York, Wiley, 1963.
294. MILLER, G. A., GALANTER E., and PRIBRAN, K. H. Plans and the structure of behavior. New York, Holt, Rinehart and Winston, 1962.
295. MILLS, J. Chain indexing and the classified catalogue. Libr. Ass. Rec. 57:141-148. 1955.

296. MILLS, J. Information retrieval. Aslib Proc. 16:48-63. 1964.
297. MILLS, J. The Universal Decimal Classification. New Brunswick, N. J., Rutgers St. Univ. Grad. Sch. Libr. Serv., 1964. (Rutgers Series on Systems for the Intellectual Organization of Information, v. 1)
298. MOHLMAN, J. W. Costs of an abstracting program. J. Chem. Doc. 1:64-67. 1961.
299. MONTAGUE, B. A. Patent indexing by concept co-ordination using links and roles. Amer. Doc. 13:104-111. 1962.
300. MONTAGUE, B. A. Testing, comparison, and evaluation of recall, relevance, and cost of co-ordinate indexing with links and roles. Amer. Doc. 16:201-208. 1965.
301. MOOERS, C. N. The indexing language of an information retrieval system, p. 21-36. In W. Simonton, ed. Information retrieval today. Minneapolis, Univ. Minn. Press, 1963.
302. MOORE, E. F. Sequential machines: selected papers. Reading, Mass., Addison-Wesley, 1964.
303. MOST, S., and KESSLER, S., S. An abstract service for specific areas of high current interest: a preliminary report. Amer. Doc. 13:86-89. 1962.
304. MOTHERWELL, G. M. Condex: a technique for automatic sub-documentary indexing. Proc. Amer. Doc. Inst. 1966:299-306.
305. MULVIHILL, J. G., and BRENNER, E. H. Faceted organization of a thesaurus vocabulary. Proc. Amer. Doc. Inst. 1966:75-183.
306. MURDOCK, J. W., and BROPHY, C. A. A comparison of the functions of libraries and information centers. Libr. Trends 14:347-352. 1966.
307. NAGEL, E., SUPPES, P., and TARSKI, A. Logic, methodology and philosophy of science. Palo Alto, Calif., Stanford Univ. Press, 1962.
308. NATHAN, R., and HANES, E. Computer programming handbook, a guide for beginners. Englewood Cliffs, N. J., Prentice-Hall, 1962.
309. NATIONAL ACADEMY OF SCIENCES/NATIONAL RESEARCH COUNCIL. OFFICE OF DOCUMENTATION. Scientific information activities of the National Academy of Sciences/National Research Council. Washington, D. C., 1962. (Publication 1031)
310. NATIONAL ACADEMY OF SCIENCES/NATIONAL RESEARCH COUNCIL. DIVISION OF MEDICAL SCIENCES. Communication problems in biomedical research. Washington, D. C., 1963.

311. NATIONAL SCIENCE FOUNDATION. Current research and development in scientific and technical documentation, No. 14. Washington, U. S. Govt. Print. Off., 1966. (NSF 66-17)
312. NATIONAL SCIENCE FOUNDATION, Nonconventional scientific and technical information systems in current use, No. 4. Washington, U. S. Govt. Print. Off., 1966. (NSF 66-24)
313. NATIONAL SCIENCE FOUNDATION. Specialized science information services in the United States. Washington, D. C., 1961. (NSF 61-68)
314. NEEDHAM, C. D. Organizing knowledge in libraries. New York, London House, 1964.
315. NEISSER, U. The imitation of man by machine. Science 130:193-197. 1963.
316. NELSON, C. E. Microfilm technology. New York, McGraw-Hill, 1965.
317. NELSON, R. J. Data processing systems. In McGraw-Hill Encyclopedia of Science and Technology. New York, McGraw-Hill, 1966.
318. NEWMAN, J. R. The world of mathematics. New York, Simon & Schuster, 1954.
319. NEWMAN, S. M. Information systems compatibility. Washington, D. C., Spartan Books, 1965.
320. O'CONNOR, J. Automatic subject recognition in scientific papers: an empirical study. J. Ass. Comp. Mach. 12:490-515. 1965.
321. O'CONNOR, J. Correlation of indexing headings and title words in three medical indexing systems. Amer. Doc. 15:96-104. 1964.
322. O'CONNOR, J. Mechanized indexing methods and their testing. J. Ass. Comp. Mach. 11:437-449. 1964.
323. OHLMAN, H. Word letter frequencies with applications to superimposed coding. Proc. Int. Conf. Sci. Inform. 1958(2):903-915. 1959.
324. OPLER, A. Programming the IBM System/360. New York, Wiley, 1966.
325. OVERHAGE, C. F. J., ED. Planning Conference on Information Transfer Experiments. (INTREX), Woods Hole, Mass., 2 August - 3 September, 1965. Cambridge, Mass., M.I.T. Press, 1965.
326. PARKER, R. H. Library applications of punched cards: a description of mechanical systems. Chicago, Amer. Libr. Ass., 1952.
327. PARKS, F. The printed word. Int. Sci. Technol. 1967:24-36.

328. PERRY, J. W. Subject matter analysis and coding - some fundamental considerations. Cleveland, West. Reserve Univ., Center Doc. Commun. Res., 1958. (Tech. Note 2)
329. PIERCE, J. R. Symbols, signals, and noise; the nature of communication. New York, Harper and Row, 1965.
330. PIERSON, R. M. Some problems in the bibliographical organization of belles-lettres. Coll. and Res. Libr. 24:297-304. 1963.
331. POTTER, G. J. C. Abstracting. In T. E. R. Singer, ed. Information and communication practice in industry, p. 281-292. New York, Reinhold, 1958.
332. QUINE, W. V. O. Methods of logic. New York, Holt, Rinehart, and Winston, 1959.
333. RANGANATHAN, S. R. Elements of library classification. New York, ASIA Publ. House, 1962.
334. RANGANATHAN, S. R. The colon classification. New Brunswick, N. J., Rutgers St. Univ. Grad. Sch. Libr. Serv., 1965. (Rutgers Series on Systems for the Intellectual Organization of Information, v. 4)
335. RATH, G. J., RESNICK, A., and SAVAGE, T. R. Comparisons of four types of lexical indicators of content. Amer. Doc. 12:126-130. 1961.
336. RATH, G. J., RESNICK, A., and SAVAGE, T. R. The formation of abstracts by the selection of sentences. Amer. Doc. 12:139-143. 1961.
337. REES, A. M. New dimensions in library education: the training of science information personnel. Spec. Libr. 54:497-502. 1963.
338. REES, A. M. Relevancy and pertinency in indexing. Amer. Doc. 13: 93-94. 1962.
339. REES, A. M. The art of teaching information science. In Heilprin, L. B., ed. Proceedings of the Symposium on Education for Information Science, p. 71-76. Washington, D. C., Spartan Books, 1965.
340. REES, A. M. The Aslib-Cranfield test of the Western Reserve Indexing System for Metallurgical Literature: a review of the final report. Amer. Doc. 16:73-76. 1965.
341. REES, A. M. The evaluation of retrieval systems. In Elias, A. W., ed. Technical information center administration. TCIA Conference 2. Drexel Institute of Technology, 1965. Washington, D. C., Spartan Books, 1965.
342. REICHMANN, F. Notched cards. In R. R. Shaw, ed. The state of library art, p. 11-54. New Brunswick, N. J., Rutgers St. Univ. Grad. Sch. Lib. Serv., 1961.

343. REISNER, P. Construction of authority files. In Newman, S. M., ed. Information systems compatibility, p. 55-67. Washington, D. C., Spartan Books, 1965. (American University Technology of Management Series, v. 1)
344. RESNICK, A. Relative effectiveness of document titles and abstracting for determining relevance of documents. Science 131:1004-1006. 1961.
345. REZA, F. N. An introduction to information theory. New York, McGraw-Hill, 1961.
346. RICHARDSON, E. C. Classification. Hamden, Conn., Shoe String Press, 1964.
347. RIDENOUR, L. N. Bibliography in an age of science. Urbana, Univ. Ill. Press, 1952.
348. RIGBY, M. Experiments in mechanized control of meteorological and geostrophysical literature and the UDC schedules in these fields. Rev. Intern. Doc. 31:103-106. 1964.
349. RILEY, W. B. Narrowing the search. Electronics 39:169-176. 1966.
350. ROBERTS, E. G. The literature of science and engineering (lecture notes series). Atlanta, Ga. Inst. Technol., Sch. Inform. Sci., 1967.
351. ROYAL McBEE CORPORATION. Keysort punching and sorting manual. New York, 1956.
352. RUSSELL, B. Human knowledge: its scope and limits. New York, Simon and Schuster, 1948.
353. RYLE, G. The concept of mind. New York, Barnes & Noble, 1950.
354. SAENGER, E. Some plain facts about computer-oriented programs in medical centers. In K. Enslein, ed. Data acquisition and processing in biology and medicine, Proceedings of the 1962 Rochester Conference, p. 321-329. New York, MacMillan, 1964.
355. SAGE, C. R. Comprehensive dissemination of current literature. Amer. Doc. 17:155-177. 1966.
356. SAGE, C. R., ANDERSON, R. R., and FITZWATER, D. R. Adaptive information dissemination. Amer. Doc. 16:185-200. 1965.
357. SCHAFF, A. Introduction to semantics. Long Island City, N. Y., Pergamon Press, 1962.
358. SCHULTHEISS, L. A., and others. Advanced data processing in the university library. New York, Scarecrow Press. 1962.
359. SCHULTZ, C. K., and SCHWARTZ, P. A. A generalized computer method for index production. Amer. Doc. 13:420-432. 1962.

360. SCHULTZ, C. K., and SHEPHERD, C. A. A computer analysis of the Merck, Sharp and Dohme Research Laboratories indexing scheme. Amer. Doc. 12:83-92. 1961.
361. SCHULTZ, L. Digital processing: a system orientation. Englewood Cliffs, N. J., Prentice-Hall, 1963.
362. SCHEELE, M. Punch-card methods in research and documentation. New York, Intersci. Publ., 1961.
363. SCIENTIFIC AMERICAN. Information. San Francisco, W. H. Freeman, 1966.
364. SEARS, M. E. List of subject headings. New York, H. W. Wilson, 1950.
365. SEE, R. Mechanical translation and related language research. Science 144:621-626. 1964.
366. SELYE, H. Symbolic shorthand system. New Brunswick, N. J., Rutgers St. Univ. Grad. Sch. Libr. Serv., 1966. (Rutgers Series on Systems for the Intellectual Organization of Information, v. 6)
367. SHANK, R. New concepts in indexing. Bull. Med. Libr. Ass. 53: 388-398. 1965.
368. SHANNON, C. E., and WEAVER, W. The mathematical theory of communication. Urbana, Univ. Ill. Press, 1949.
369. SHARP, H. S., ED. Readings in information retrieval. New York, Scarecrow Press, 1964.
370. SHARP, J. R. Some fundamentals of information retrieval. New York, London House and Maxwell, 1965.
371. SHAW, R. R. Documentation and the individual. Science 137: 409-411. 1962.
372. SHAW, R. R. Information retrieval. Science 140:606-609. 1963.
373. SHAW, R. R. Parameters for machine handling of alphabetic information. Amer. Doc. 13:267-269. 1962.
374. SHERA, J. H. Librarians against machines. Science 156:746-750. 1967.
375. SHERA, J. H. Documentation and the organization of knowledge. Hamden, Conn., Shoe String Press, 1966.
376. SHERA, J. H. Libraries and the organization of knowledge. Hamden, Conn., Shoe String Press, 1965.
377. SIMMONS, G. W. Centralized abstracting of petroleum literature and patents. J. Chem. Doc. 5:166-169. 1965.

378. SIMMONS, R. F. Natural language processing and information retrieval research program at SDC and automatic document classification by factor analysis. SDC Mag. 8:1-14. 1965.
379. SIMONTON, W. Information retrieval today. Minneapolis, Univ. of Minn., Center for Continuation Study, 1963.
380. SIMPSON, G. S., JR. Scientific information centers in the United States. Amer. Doc. 13:43-53. 1962.
381. SINGER, T. E. R. Information and communication practice in industry. New York, Reinhold, 1958.
382. SINGH, J. Great ideas in information theory, language, and cybernetics. New York, Dover, 1966.
383. SIPPL, C. J. Computer dictionary. Indianapolis, Ind., W. Howard, 1966.
384. SLAMECKA, V. Classificatory, alphabetical and associative schedules as aids to co-ordinate indexing. Amer. Doc. 14:223-228. 1963.
385. SLAMECKA, V. On the nature of information science and the responsibility of institutions of higher education. In Heilprin, L. B., ed. Proceedings of the Symposium on Education for Information Science, p. 91-96. Washington, D. C., Spartan Books, 1965.
386. SLAMECKA, V. Studies in co-ordinate indexing, Vol. VI. Bethesda, Md., Documentation, Inc., 1965.
387. SLAMECKA, V. The coming age of information technology. In Studies in co-ordinate indexing, Vol. IV. Bethesda, Md., Documentation, Inc., 1965.
388. SMITH, M. H. An evaluation of abstracting journals and indexes. Proc. Int. Conf. Sci. Inform. 1958(1):322-350. 1959.
389. SPRAGUE, K. H. A comparison of systems for selectively disseminating information. Bloomington, Ind. Univ., Bur. Bus. Res., 1965.
390. STERNBERG, S. Stochastic learning theory. In R. Luce, and others, eds. Handbook of Mathematical Psychology, Vol. II, p. 1-120. New York, Wiley, 1963.
391. STEVENS, M. E. Automatic indexing: a state-of-the-art report. Washington, U. S. Govt. Print. Off., 1965. (National Bureau of Standards Monograph 91)
392. STEVENS, M. E., GIULIANO, V. E., and HEILPRIN, L. B. Statistical association methods for mechanized documentation. Washington, U. S. Govt. Print. Off., 1965. (National Bureau of Standards Miscellaneous Publication No. 269)
393. STEVENS, S. S. Problems and methods of psychophysics. Psych. Bull. 55:177-196. 1958.

394. STOBAUGH, R. E. Editing organic abstracts for Chemical Abstracts. J. Chem. Doc. 1:22-23. 1961.
395. STRAUSS, L. J., STRIEBY, I. M., and BROWN, A. L. Scientific and technical libraries: their organization and administration. New York, Wiley, 1964. (Library Science and Documentation; a Series of Texts and Monographs, v. 4)
396. SWANSON, D. R. Dialog with the catalog. Libr. Quart. 34:113-125. 1964.
397. SWANSON, D. R. Searching natural language text by computer. Science 132:1099-1104. 1960.
398. SWANSON, R. W. Information system networks...Let's profit from what we know. Arlington, Va., U. S. Air Force, Off. Aerospace Res., 1966. (AFOSR S66-0873).
399. SWETS, J. A. Information retrieval system. Science 141:245-250. 1963.
400. SWETS, J. A., TANNER, W. P., and BUDSALL, T. G. Decision processes in perception. In J. A. Swets, ed. Signal detection and recognition by human observers, p. 1-91. New York, Wiley, 1964.
401. TAINE, S. Mechanization and international library cooperation of the future. UNESCO Bull. Libr. 19:308-311. 1965.
402. TAUBE, M. On unit terms and co-ordinate indexing. Amer. Doc. 3: 213-218. 1952; 4:67-81. 1953; 12:98-100. 1961.
403. TAUBE, M. Notes on the use of roles and links in co-ordinate indexing. Amer. Doc. 12:98-100. 1961.
404. TAUBE, M. Storage and retrieval of ideas by means of the association of ideas. Amer. Doc. 6:1-18. 1955.
405. TAUBE, M. Unit terms in co-ordinate indexing. Amer. Doc. 3:213-218. 1952.
406. TAUBE, M., and WOOSTER, H., EDS. Information storage and retrieval: theory, systems, and devices. New York, Col. Univ. Press, 1958.
407. TAUBES, E. P. Electronic data retrieval and microfilm. Proc. Nat. Microfilm Ass. 13:309-313. 1964.
408. TAYLOR, R. Professional aspects of information science and technology. In Cuadra, C. A., ed. Annual review of information of science and technology, p. 15-40. New York, Interscience Publ., 1966.
409. TAYLOR, R. Towards an educational base for the information sciences and information engineering. In Heilprin, L. B., ed. Proceedings of the Symposium on Education for Information Science Education, p. 77-82. Washington, D. C., Spartan Books, 1965.

410. TOCHER, K. D. The art of simulation. Princeton, N. J., Van Nostrand, 1963.
411. TOMESKI, E. A., and others. The clarification, unification and integration of information storage and retrieval. New York, Spec. Libr. Ass., 1961.
412. TRAKHTENBROT, B. A. Algorithms and automatic computing machines. Boston, Mass., Heath, 1963.
413. TYAGANATARAJAN, T. A study in the development of Colon Classification. Amer. Doc. 12:270-279. 1961.
414. UHR, L. Pattern recognition. New York, Wiley, 1966.
415. ULLMANN, S. Semantics: an introduction to the science of meaning. Oxford, Blackwell, 1962.
416. URQUHART, D. J. Physics abstracting - use and users. J. Doc. 21:113-131. 1965.
417. U. S. ARMY MISSILE COMMAND. Redstone scientific information center. Huntsville, Ala., Redstone Arsenal, 1966.
418. U. S. BUREAU OF THE BUDGET. Report to President on the management of automatic data processing in the Federal government. Washington, U. S. Govt. Print. Off., 1965.
419. U. S. BUREAU OF SHIPS. Project SHARP (Ships Analysis and Retrieval Project) information storage and retrieval system: evaluation of indexing procedures and retrieval effectiveness. Washington, D. C., 1964.
420. U. S. CONGRESS. HOUSE. SELECT COMMITTEE ON GOVERNMENT RESEARCH. Report on H. R. 504, Documentation and dissemination of research and development results. Washington, U. S. Govt. Print. Off., 1964.
421. U. S. CONGRESS. SENATE. COMMITTEE ON GOVERNMENT OPERATIONS. SUBCOMMITTEE ON REORGANIZATIONS. Summary of activities toward interagency co-ordination. Washington, U. S. Govt. Print. Off., 1965.
422. U. S. DEFENSE DOCUMENTATION CENTER. Thesaurus of DDC descriptors. Alexandria, Va., 1966.
423. U. S. FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY. COMMITTEE ON SCIENTIFIC AND TECHNICAL INFORMATION. Recommendations for national document handling systems in science and technology. Washington, U. S. Nat. Bur. Stand., Inst. Appl. Technol., 1965.
424. U. S. FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY. COMMITTEE ON SCIENTIFIC INFORMATION. Status report on scientific and technical information in the Federal government. Washington, U. S. Off. Tech. Serv., 1963.

425. U. S. NATIONAL SCIENCE FOUNDATION. Federal funds for scientific and technical information. Federal funds for research, development and other scientific activities, fiscal years 1965, 1966, and 1967. Washington, U. S. Govt. Print. Off., 1967.
426. U. S. NATIONAL SCIENCE FOUNDATION. OFFICE OF SCIENCE INFORMATION SERVICE. Non-conventional technical information systems in current use, no. 1. Washington, U. S. Govt. Print. Off., 1958.
427. U. S. PRESIDENT'S SCIENCE ADVISORY COMMITTEE. Science, government, and information. Washington, D. C., 1963.
428. VICKERY, B. C. Classification and indexing in science. London, Butterworth, 1959.
429. VICKERY, B. C. Faceted classification: a guide to construction and use of special schemes. London, Aslib, 1960.
430. VICKERY, B. C. Faceted classification schemes. New Brunswick, N. J., Rutgers, St. Univ. Grad. Sch. Lib. Serv., 1965. (Rutgers Series on Systems for the Intellectual Organization of Information, v. 5)
431. VICKERY, B. C. On retrieval information system theory. London, Butterworth, 1961.
432. VICKERY, B. C. Subject analysis for information retrieval. Proc. Int. Conf. Sci. Inform. 1958(2):855-865. 1959.
433. VICKERY, B. C. The Universal Decimal Classification and technical information indexing. UNESCO Bull. Libr. 15:126-138. 1961.
434. VICKERY, B. C. Thesaurus - a new word in documentation. J. Doc. 16:181-189. 1960.
435. VOIGT, M. J. Scientists' approaches to information. Chicago, Amer. Libr. Ass., 1961.
436. VORESS, H. E. Improvements in a permuted title index. Amer. Doc. 16:97-100. 1965.
437. WADINGTON, J. P. Unit concept co-ordination indexing. Amer. Doc. 9:107. 1958.
438. WALKER, J. F., and SCHIRMER, R. F. The indexing of technical books. J. Chem. Doc. 6:26-30. 1966.
439. WALL, E. Information retrieval thesauri. New York, Eng. Joint Counc., 1962.
440. WALLACE, E. M. Rank order patterns of common works as discriminators of subject content in scientific and technical prose. In Symposium on Statistical Association Methods for Mechanized Documentation, p. 225-229. Washington, D. C., 1966.

441. WASSERMAN, P. The librarian and the machine. Detroit, Mich., Gale Res. Co., 1965.
442. Weil, B. H. Some reader reaction to abstract-bulletin style. J. Chem. Doc. 1:52-58. 1961.
443. WEIL, B. H., ZAREMBER, I., and OWEN, H. Technical-abstracting fundamentals. I. Introduction. J. Chem. Doc. 3:86-89. 1963.
444. WEIL, B. H., ZAREMBER, I., and OWEN, H. Technical-abstracting fundamentals. II. Writing principles and practices. J. Chem. Doc. 3:125-132. 1963.
445. WEIL, B. H., OWEN H., and ZAREMBER, I. Technical-abstracting fundamentals. III. Publishing abstracts in primary journals. J. Chem. Doc. 3:132-136. 1963.
446. WEIMER, A. M., and TIMMS, H. L. The Aerospace Research Applications Center (Indiana University). Bus. Horiz. 7:93-100. 1964.
447. WEINBERG, A. M. Scientific communication. Int. Sci. Technol. 16:65,67,68,71,72,74. 1963.
448. WEINBERG, G. M. PL/1 programming primer. New York, McGraw-Hill, 1966.
449. WEINBERG, J. Abstraction, relation, and induction. Madison, Univ. Wis. Press, 1965.
450. WELLS, M. J. Information and its dissemination: report of the summer meeting of the Institute of Petroleum held at Harrogate, 7-10 June. London, Inst. Petroleum, 1961.
451. WELT, I. D. A combined indexing-abstracting system, Proc. Int. Conf. Sci. Inform. 1958(1):449-459. 1959.
452. WELT, I. D. Indexes and index mechanization in biomedicine. J. Chem. Doc. 3:169-174. 1963.
453. WETSEL, F. R. Time studies in producing subject indexes for Chemical Abstracts. J. Chem. Doc. 5:212-214. 1965.
454. WHALEY, F. R. The use of a collator in an inverted file index. Spec. Libr. 53:65-73. 1962.
455. WHALEY, F. R. The use of subordinate and co-ordinate indexing vs. the scanning of their outputs. J. Chem. Doc. 5:102-106. 1965.
456. WHYTE, W. W. The organization man. New York, Doubleday, 1957.
457. WIENER, N. Cybernetics. New York, Wiley, 1948.
458. WILLIAMS, A. S., and WELT, I. D. The analysis and indexing of the psychopharmacological literature. J. Chem. Doc. 5:176-179. 1965.

- 459. WILLIAMS, W. F. Principles of automated information retrieval.
Elmhurst, Ill., Bus. Press, 1965.
- 460. WILSON, I. G., and WILSON, M. E. Information computer and system design.
New York, Wiley, 1965.
- 461. WOOD, E. I. Report on project history retrieval; tests and demonstrations
of an optic-coincidence system of information retrieval for historical
materials. Philadelphia, Drexel Inst. Technol., Grad. Sch. Libr.
Sci., 1966.
- 462. WOODBURN, J. H., and OBOURN, E. S. Teaching the pursuit of sciences.
New York, MacMillan, 1965.
- 463. WUEST, F. J. Studies in the methodology of measuring information
requirements and use patterns. Bethlehem, Pa., Lehigh Univ.,
Center Inform. Sci., 1965.

III. AUTHOR INDEX

Adler, I.	1	Brillouin, L.	56,57
Agard Evans, A.B.	2	British Standards Institute	58
Aines, A.A.	3	Brodsky, G.	59
Album, H.H.	191	Brooks, F.P.	60
Alston, W.P.	4	Brophy, C.A.	306
American Chemical Society	5	Brosin, H.W.	61
American Data Processing	6	Brown, A.F.	62
American Documentation Institute	7	Brown, A.L.	395
8,9		Brown, J.S.	163
American Institute of Physics	10	Buckholz, W.	63
American Institute for Research	11	Budsall, T.G.	400
American Telephone & Telegraph		Busaker, R.G.	64
Company	12	Bush, R.	260
Anderson, D.M.	13		
Anderson, R.R.	356	Campbell, D.T.	65
Anthony, R.N.	14	Carnap, R.	31
Armed Services Technical	15	Carr, J.W.	66
Information Agency		Carroll, J.B.	67
Artandi, S.	16,17	Carter, L.F.	68
Ash, R.	18	Cartwright, K.L.	69
Atherton, P.	19,20	Casey, R.S.	70
Auerbach Corporation	21	Chapin, N.	71
Austin, C.	22	Chatman, S.	51
Austin, J.L.	23	Cherry, C.	72,73
Awad, E.M.	24	Chestnut, H.	74
		Chomsky, N.	75,76,77,293
Bagley, P.R.	25	Clapp, V.W.	78,79
Barelas, A.	26	Cleverdon, C.	80,81,82,83
Barhard, H.J.	257	Coates, E.J.	84,85
Bar-Hillel, J.	31	Coblans, H.	86
Bar-Hillel, Y.	27,28,29,30	Cohan, L.	87
Barhydt, G.	32	Cohen, M.R.	88
Barish, N.N.	33	Cohen, S.M.	89
Becker, J.	34	Cole, R.I.	90
Bello, F.	35	Conte, S.D.	91
Belzer, J.	36	Cooper, W.S.	92
Berkeley, E.C.	37	Copi, I.M.	93
Berkeley Symposium	38	Corbato, F.J.	123
Bernier, C.L.	39,40,41	Costello, J.C. Jr.	94,95,96,97,98
Berry, M.	70	Cox, N.	99
Berul, L.	42	Crane, E.J.	100
Beyer, T.G.	43	Craven, K.	87
Blankenship, D.A.	115	Cuadra, C.A.	101
Bloomfield, L.	44		
Bloomfield, M.	45	Davis, G.B.	102
Bluemle, A.	46	Dean, A.J.	210
Boaz, M.	47	Delucia, A.	103
Bohnert, L.M.	48	Dennis, B.K.	104
Borko, H.	49,50,51	Densmore, G.	105
Bourne, C.P.	52,53,54,55,105	Dewey, H.	106
Brenner, E.H.	249,305	Dews, J.D.	99

Dimitry, D.	107
Dobell, A.R.	194
Documentation Incorporated	108,109
110,111	
Dolby, J.L.	99
Dougherty, R.F.	112
Doyle, L.B.	113,114,115
Ebersole, J.L.	116
Elderfield, R.C.	117
Elias, A.W.	118
Emig, J.A.	119
Engineers Joint Council	120
Fairthorne, R.A.	121
Fano, R.M.	122,123
Fant, G.	211
Farradane, J.	2
Feldman, J.	124
Fiegenbaum, E.A.	124
Fischer, M.	125
Fisher, E.L.	126
Fisher, P.F.	127
Fitch, F.	128
Fitts, P.M.	129
Fitzpatrick, W.H.	130
Fleming, J.T.	119
Flores, I.	131,132,133
Fodor, J.A.	134
Ford, D.	55
Foskett, D.J.	135,136,137
Freeman, R.	138
Friedenstein, H.	139
Fry, B.M.	140
Gabor, D.	141
Gainen, L.	142
Galanter, E.	259,260,294
Gardin, J.C.	143
Garfield, E.	144,145,146,147
Gentle, E.C. Jr.	148
Georgia Institute of Technology	149
Gildersleeve, T.R.	241
Gillie, A.	150
Ginsberg, S.	151
Giuliano, V.E.	392
Gleason, H.A.	152
Goda, J.J. Jr.	153
Gonzalez, R.F.	285
Goode, H.H.	154,155
Gordon, M.	280
Gorn, S.	156
Green, B.F. Jr.	157
Green, J.C.	158

Gregg, J.R.	159
Gregory, R.H.	160
Gull, C.D.	161,162
Gyr, J.W.	163
Halacy, D.S.	164
Hall, A.D.	165
Halle, M.	211
Hanes, E.	308
Hanson, P.	166
Hariman, H.	167
Harris, J.	185
Harvey, J.	168
Hattery, L.H.	169
Hawken, W.R.	170
Hayes, R.M.	34,171
Haykin, D.J.	172
Hays, D.G.	173
Heilprin, L.B.	174,175,176,392
Heinritz, F.J.	112
Hempel, C.G.	177
Herner, S.	178,179
Highet, G.	180
Hillman, D.J.	181
Hilton, A.M.	182
Hines, T.C.	17,183,184,185
Hirayama, K.	186
Holm, B.E.	187,188
Holzbaur, F.	189
Hooper, R.S.	190
Hoshovsky, A.	191
Houston, N.	192
Howerton, P.W.	193
Hull, T.E.	194
Hunt, E.B.	195
Information Dynamics Inc.	196
Institute for Scientific Information	197
International Business Machines Corporation	198
199,200,201,202,203,204,205,206,207	
Iverson, K.E.	60,208
Jahoda, G.A.	209,210
Jakobson, R.	211
Jaster, J.J.	212
Joergensen, J.	213
Jones, K.S.	214
Jones, M.H.	215
Jonker Business Machines, Inc.	216
Jonker, F.	217,218
Joyce, T.	219

Karplus, W.J.	220	Matt, T.	107
Katz, D.L.	221	McCandless, R.F.J.	280
Katz, J.J.	134,222,223	McCarthy, J.	281,282
Keen, M.	83	McClelland, R.M.A.	283
Kent, A.	70,224,225,226	McCormick, E.M.	169
Kessler, M.M.	227,228,229	McCracken, D.D.	284
King, G.W.	230	McMillan, C.	285
Kiriyama, I.	231	McNeill, W.I.	286
Knable, J.P. II	232	Meadow, C.T.	287
Knower, B.M.	233	Melchert, N.P.	62
Kochen, M.	234	Menzel, H.	288
Kraft, D.H.	235,236	Merritt, C.A.	289
Krick, E.V.	237	Metcalfe, J.	290,291
Kruzas, A.T.	238	Meyer, H.A.	292
Kuney, J.H.	239,240	Miller, G.A.	293,294
		Mills, J.	82,83,295,296,297
Laden, H.N.	241	Mohlman, J.W.	298
Langham, C.C.	100	Monroe, E.	130
Lauer, C.M.	89	Montague, B.A.	299,300
Leblanc, H.	242	Mooers, C.N.	301
Le Carbeiller, P.	243	Moore, E.F.	302
Lee, T.	284	Most, S.	303
Leed, J.	244	Motherwell, G.M.	304
Leeds, H.D.	245	Mulvihill, J.G.	305
Leftcowity, B.	55	Murdock, J.W.	306
Lenneberg	246	Murray, B.R.	212
Lenoir, S.P. Jr.	247		
Leslie, P.	248	Nagel, E.	88,307
Levey, G.C.	257	Nathan, R.	308
Lewenz, G.F.	249	National Academy of Sciences/ National Research Council	309,310
Libbey, M.	250	National Science Foundation	312,313
Licklider, J.C.R.	251,252		311,425,426
Lipetz, B.A.	253,254	Needham, C.D.	314
Liston, D.M. Jr.	255	Needham, R.M.	219
London, G.	256	Neisser, U.	315
Long, J.M.	257	Nelson, C.E.	316
Loukopoulos, L.	258	Nelson, P.J.	289
Lovett, L.	37	Nelson, R.J.	317
Luce, R.D.	259,260	Newman, J.R.	318
Luhn, H.P.	261,262,263,264	Newman, S.M.	319
Lunin, L.F.	265		
Lunin, L.G.	266	Obourn, E.S.	462
Lyons, J.	267	O'Connor, J.	320,321,322
		Ohlman, H.	323
Machol, R.E.	155	Oliva, J.J.	210
Mackay, D.M.	268	Opler, A.	324
Maizell, R.E.	269	Overhage, C.F.S.	325
Mandelbrot, B.	270	Owen, H.	443,444,445
Mapleson, W.W.	283		
Marden, E.C.	271	Parker, E.K.	189
Markus, J.	272,273	Parker, R.H.	326
Markuson, B.E.	274	Parks, F.	327
Maron, M.E.	275	Perry, J.W.	70,328
Martin, E.W. Jr.	276	Peterson, G.D.	55
Martyn, J.	277,278,279		

Pierce, J.R.	329	Simpson, G.S. Jr.	380
Pierson, R.M.	330	Singer, T.E.R.	381
Popp, H.M.	119	Singh, J.	382
Postal, P.M.	223	Sippl, C.J.	383
Potter, G.J.C.	331	Skweir, E.A.	280
Pribran, K.H.	294	Slamecka, V.	384,385,386,387
		Slater, M.	279
Quine, W.V.O.	332	Smith, M.H.	388
		Sprague, R.H.	389
Ranganathan, S.R.	334,333	Sternberg, S.	390
Rasmussen, L.E.	188	Stevens, M.E.	391,392
Rath, G.J.	335,336	Stevens, S.S.	393
Rees, A.M.	337,338,339,340,341	Stobaugh, R.E.	394
Reichmann, F.	342	Stovall, M.	266
Reisner, P.	343	Strauss, L.J.	395
Resnick, A.	335,336,344	Strieby, I.M.	395
Reza, F.N.	345	Suppes, P.	307
Richardson, E.C.	346	Swanson, D.R.	396,397
Ridenour, L.N.	347	Swanson, R.W.	398
Rigby, M.	348	Swets, J.A.	399,400
Riley, W.B.	349	Swindle, G.F.	127
Roberts, E.G.	350		
Royal McBee Corporation	351	Taine, S.	401
Russell, B.	352	Tanner, W.P.	400
Ryle, G.	353	Tarski, A.	307
		Taube, M.	212,402,403,404,405,406
Saaty, T.	64	Taubes, E.P.	407
Saenger, E.	354	Taylor, R.	408,409
Sage, C.R.	355,356	Teplitz, A.	231
Savage, T.R.	335,336	Timms, H.L.	446
Schaff, A.	357	Tocher, K.D.	410
Scheele, M.	362	Tomeski, E.A.	411
Schirmer, R.F.	438	Trakhtenbrot, B.A.	412
Schultheiss, L.A.	358	Tyaganatarajan, T.	413
Schultz, C.K.	359,360		
Schultz, L.	361	Uhr, L.	414
Schwartz, B.C.	89	Ullmann, S.	415
Schwartz, P.A.	359	Urquhart, D.J.	416
Scientific American	363	U.S. Army Missile Command	417
Sears, M.E.	364	U.S. Bureau Budget	418
See, R.	365	U.S. Bureau of Ships	419
Selye, H.	366	U.S. Congress House	420
Shank, R.	367	U.S. Congress Senate	421
Shannon, C.E.	368	U.S. Defense Documentation	
Sharp, H.S.	369	Center	422
Sharp, J.k.	370	U.S. Federal Council for	
Shaw, R.R.	371,372,373	Science & Technology	423,424
Shepherd, C.A.	360	U.S. National Science	
Sher, I.H.	147	Foundation	311,312,313,426,425
Shera, J.H.	374,375,376	U.S. President's Science	
Shoffner, R.M.	69	Advisory Committee	427
Simmons, G.W.	377		
Simmons, R.F.	378	Van Horn, R.L.	160
Simonton, W.	379	Vickery, B.C.	428,429,430,431,432
			433,434

Voigt, M.J.	435
Voress, H.E.	436
Wadington, J.P.	437
Walker, J.F.	438
Wall, E.	192,439
Wallace, E.M.	440
Wasserman, P.	441
Weaver, W.	368
Weksel, W.	43
Weil, B.H.	442,443,444,445
Weimer, A.M.	446
Weinberg, A.M.	447
Weinberg, G.M.	245,448
Weinberg, J.	449
Weiss, H.	284
Wells, M.J.	450
Welt, I.D.	451,452,458
Wetsel, F.R.	453
Whaley, F.R.	455,454
Whyte, W.W., Jr.	456
Wiener, N.	457
Wille, R.	163
Williams, A.S.	458
Williams, W.F.	459
Wilson, M.E.	460
Wilson, I.G.	460
Wood, E.I.	461
Woodburn, J.H.	462
Wooster, H.	406
Wuest, F.J.	463
Yovich, J.C.	20
Zarembek, I.	443,444,445
Zwan, A.	163

IV. PERMUTED TITLE INDEX

abstract and amount of information/Length of an	186
abstract bulletins/Alerting with internal	139
abstract-bulletin style/Some reader reaction to	442
abstract evaluation and design/Index-	103
Abstracting/	331
abstracting by association/Indexing	113
Abstracting control/	59
abstracting for determining relevance of documents/(evaluation)Relative e	344
abstracting fundamentals/Technical	443
abstracting fundamentals/Technical	444
abstracting fundamentals/Technical	445
abstracting journals and indexes/An evaluation of	388
abstracting journals/Tests on	279
abstracting of petroleum literature and patents/Centralized	377
abstracting program/Costs of an	298
abstracting publications/Subject slanting in scientific	179
(abstracting)Secondary journals in chemical and biological fields/	280
abstracting system/A combined indexing-	451
abstracting three types of journals/Study of physics abstracts -	20
abstracting - use and users/Physics	416
Abstraction, relation, and induction/	449
Abstract journals and bulletins/	233
abstracts by the selection of sentences/The formation of	336
abstracts/Criteria for acceptable	51
abstract service for specific areas of high current interest: a prelimi	303
abstracts for Chemical Abstracts/Editing organic	394
abstracts prepared by humans with those in titles/An experiment comparin	232
abstracts/Style and speed in publishing	249
abstracts/The automatic creation of literature	264
accounting principles/Management	14
administration/Scientific and technical libraries: their organization a	395
administration/Systems analysis for effective	33
administration/Technical information center	118
Aerospace Research Applications Center/(information center)The	446
Algorithms and automatic computing machines/	412
alphabetical: classified: co-ordinate: mechanical/Information indexin	291
alphabetic information/Parameters for machine handling of	373
analysis and indexing of the psychopharmacological literature/The	458
analysis of the Merck, Sharp and Dohme Research Laboratories indexing sc	360
Annual review of information science and technology/	101
arithmetic and boolean algebra/Binary	150
ASCA/How to submit your interest profile for	197
Aslib-Cranfield test of the Western Reserve indexing system for metallur	340
(ASTIA)/Thesaurus code manual	15
automatic classification/Technical advances in	115
automatic creation of literature abstracts/The	264
Automatic data processing/	60
automatic data processing on the Federal government/Report to President	418
Automatic data-processing system: principles and procedures/	160
automatic document classification by factor analysis/Natural language pr	378
Automatic fact retrieval/	92
Automatic indexing: an experimental inquiry/	275
Automatic indexing: a state-of-the-art report/	391

Automatic language processing/	173
Automatic language processing: the state of the art/	49
Automatic subject recognition in scientific papers: an empirical study/	320
Automation/	46
Automation and the Library of Congress/	230
automation and data processing for libraries/Closing the circuit:	78
automation/(computers)Logic, computing machines, and	182
automation/Libraries and	274
authority files/(thesaurus)Construction of	343
behavioral science/Computer applications in the	50
behavior/(psychology)Plans and the structure of	294
belles-letters/Some problems in the bibliographical organization of	330
bibliographical organization of belles-letters/Some problems in the	330
bibliographic, and catalog entries/Computer filing of index,	185
bibliographic coupling and analytic subject indexing/Comparison of the r	228
Bibliographic coupling between scientific papers/	227
bibliographic coupling of physics literature/Three experiments with cita	10
Bibliography in an age of science/	347
Binary arithmetic and boolean algebra/	150
(biology)Punch-card methods in research and documentation/	362
biomedical research/Communication problems in	310
biomedicine/Indexes and index mechanization in	452
book form/Catalogs in	69
boolean algebra/Binary arithmetic and	150
boolean algebra, and computers/Thinking machines; a layman's introductio	1
business: an introduction/Data communications in	12
business/Data communications in	148
Business data processing/	24
Business data processing systems encyclopedia/	6
cancer research institution/thesaurus for literature analysis in a	266
cards/Notched	342
catalog/Dialog with the	396
catalog entries/Computer filing of index, bibliographic, and	185
Catalogs in book form/	69
catalogs/Subject	85
catalogue/Chain indexing and the classified	295
cataloguing: alphabetical: classified: co-ordinate: mechanical/Infor	291
cataloguing and classification/An introduction to library	106
Chain indexing and the classified catalogue/	295
Chemical Abstracts/Editing organic abstracts for	394
Chemical Abstracts Service/On-the-job training at	100
Chemical Abstracts/Time studies in producing subject indexes for	453
chemical information/HAYSIAZ: a mechanized system for searching	271
chemical literature/Searching the	5
chemical research and patent information by links and roles in Dupont/(i	97
chemistry/Notation systems as applied to organic	117
citation index - a new dimension in indexing/Science	146
citation indexes/An examination of	277
Citation indexes in sociological and historical research/	145
citation indexes to science literature through inclusion of citation rel	253
citation index for chemical patents/Breaking the subject index barrier -	144
Citation indexing/	278
citation indexing and bibliographic coupling of physics literature/Three	10
citation indexing/New factors in the evaluation of scientific literature	147

Classification/	346
classification/A comparison of KWIC indexing of titles with a subject he	236
classification: a guide to construction and use of special schemes/Face	429
(classification)Alphabetical subject indication of information/	290
Classification and indexing in science/	428
Classification and indexing in the social sciences/	135
classification and technical information indexing/The universal decimal	433
classification/An introduction to library cataloguing and	106
classification/A study in the development of colon	413
classification by factor analysis/Natural language processing and inform	378
classification/Elements of library	333
(classification)Faceted organization of a thesaurus vocabulary/	305
classification/Guide to the Universal Decimal	58
Classification Research/Proceedings of the Second Internation Study Conf	19
classification schemes/Faceted	430
classification/Synonymy and semantic	214
classification systems/Computers and	138
classification/Technical advances in automatic	115
classification/The colon	334
classification/The universal decimal	297
classified: co-ordinate: mechanical/Information indexing and subject c	291
classified schedules and generic features in co-ordinate indexing/Constr	283
classifying and searching/(retrieval)A classed thesaurus as an aid to in	256
coding--some fundamental considerations/(indexing)Subject matter analysi	328
coding/Word letter frequencies with applications to superimposed	323
collator in an inverted file index/The use of a	454
colon classification/A study in the development of	413
colon classification/The	334
communication/Contribution a la theorie mathematique des jeux de	270
communication engineering/On statistical methods in	38
(communication)On psychophysiological models/	252
communication practice in industry/Information and	381
Communication problems in biomedical research/	310
(communication)Review of studies in the flow of information among scient	288
communication/Scientific	447
(communication)Semantic information/	31
communications in business: an introduction/Data	12
communications in business/Data	148
communication/Symbols, signals, and noise; the nature of	329
communication systems/Systematic error on the part of human links in	65
communication/The mathematical theory of	368
communication theory/Lectures on	141
compatibility/information systems	319
computer analysis of the Merck, Sharp and Dohme Research Laboratories in	360
computer and information sciences: a new basic discipline/The	156
computer and literary style/The	244
computer and the library: the role of the computer in the organization	99
Computer applications in the behavioral sciences/	50
computer applications/System design for	241
computer approach to decision models/Systems analysis, a	285
computer-based subject category assignment/Selective information dissemi	189
Computer design/	131
Computer dictionary/	383
(computer)Digital processing: a system orientation/	361
Computer filing of index, bibliographic, and catalog entries/	185

computer/Five operational years of inverted index manipulation by an electronic	104
computer(lecture notes series), School of Information Science, Georgia I	153
computer method for index production/A generalized	359
computer organization and programming/(education)Digital	247
computer-oriented programs in medical centers/Some plain facts about	354
Computer programming/	132
Computer programming fundamentals/	245
Computer programming handbook, a guide for beginner/	308
Computer programming systems/	127
Computers and classification systems/	138
computers and data processing/Glossary of terms in	37
Computers and scientific periodicals/(journals)	239
Computers and thought/	124
computers/An introduction to automatic	71
computers/An introduction to electronic	102
computers/Better	66
computer/Searching natural language text by	397
(computer)Selective dissemination of new scientific information with the	263
(computers)Electronic digital machines for high speed information search	25
Computer simulation and psychological theories of perception/	163
computers in commercial publishing/State of the art of	272
computers in research: an introduction for behavioral and social scient	157
(computers)Logic, computing machines, and automation/	182
Computer software/	133
computers/Programming business	284
Computers - the machines we think with/	164
computers/Thinking machines; a layman's introduction to logic, boolean a	1
computers/Time-sharing on	123
(computer)System engineering; an introduction to the design of large-sca	154
computer system/On-line computing: time-shared man-	220
computer system/Planning a	63
computing machines/Algorithms and automatic	412
concept co-ordination/(indexing)Some solutions to operational problems i	96
concept co-ordination using links and roles/Patent indexing by	299
concept formation in empirical science/Fundamentals of	177
Concept learning/	195
concept of mind/The	353
Condex: a technique for automatic sub-documentary indexing/	304
consistency tests--origin, measurements, results, and utilization/Indexe	190
co-ordinate indexes: an experimental comparison/Alphabetic subject inde	161
co-ordinate indexes/(indexing)A basic theory of roles on syntactical con	94
Co-ordinate indexing/	95
co-ordinate indexing/Classificatory, alphabetical and associative schedu	384
co-ordinate indexing/Construction and usage of classified schedules and	283
co-ordinate indexing/Installation manual for the uniterm system of	109
co-ordinate indexing/Notes on the use of roles and links in	403
co-ordinate indexing/On unit terms and	402
co-ordinate indexing/State of the art of	110
co-ordinate indexing; technical report no. 6/The mechanization of	111
co-ordinate indexing/The coming age of information technology, studies i	387
co-ordinate indexing/The state of the art of	212
co-ordinate indexing/Unit terms in	405
co-ordinate indexing, Vol. VI/Studies in	386
co-ordinate indexing vs. the scanning of their outputs/The use of subord	455
co-ordinate indexing with links and roles/Testing, comparison, and evalu	300
co-ordinate: mechanical/Information indexing and subject cataloguing:	291

co-ordination/(indexing)Some solutions to operational problems in concept	96
co-ordination indexing/Unit concept	437
co-ordination/Summary of activities toward interagency	421
Copying methods manual/	170
Correlative indexes/	39
cost analysis and utilization study of the Stanford University library s	105
cost control systems/Effective	286
coupling and analytic subject indexing/Comparison of the results of bibl	228
coupling between scientific papers/Bibliographic	227
Cranfield hypothesis/(indexing)(evaluation)The	81
Criteria for acceptable abstracts/	51
Cybernetics/	457
cybernetics/Great ideas in information theory, language and	382
Data flow: the general problem and cognitive model/	11
Data-information availability/	90
data processing: an introduction/Electronic	276
data processing/An introduction to IBM punched card	198
data processing/Automatic	60
data processing/Business	24
data processing for libraries/Closing the circuit: automation and	78
data processing/Glossary of terms in computers and	37
Data processing in public and university libraries/	168
data processing in the university library/Advanced	358
data-processing system: principles and procedures/Automatic	160
Data processing systems/	317
data processing systems encyclopedia/Business	6
data processing systems/Introduction to IBM	204
data systems analysis/A simulation model for	142
DDC descriptors/Thesaurus of	422
decision making/Executive	215
Decision processes in perception/	400
deductive inference/Techniques of	242
descriptive linguistics/An introduction to	152
descriptors/Thesaurus of DDC	422
design/Computer	131
design/Information computer and system	460
Dialog with the catalog/	396
Dictionary buildup and stability of word frequency in a specialized medi	257
dictionary/Computer	383
Digital computers in research: an introduction for behavioral and socia	157
Digital processing: a system orientation/(computer)	361
discriminators subject content in scientific and technical prose/(statis	440
disseminating information/A comparison of systems for selectively	389
dissemination/Adaptive information	356
dissemination by computer-based subject category assignment/Selective in	189
dissemination of current literature/Comprehensive	355
dissemination of information/General information manual- selective	203
dissemination of new scientific information with the aid of electronic p	263
dissemination of research and development results/Report on H.R.504, doc	420
dissemination/(petroleum)Information and its	450
documentation and dissemination of research and development results/Repo	420
Documentation and the individual/	371
Documentation and the organization of knowledge/	375
documention/Modern trends in	47

documentation, National Bureau of Standards, Miscellaneous Publication No	392
documentation No.14, NSF 66-17/Current research and development in scient	311
documentation/The current situation in	248
documentation/Thesaurus - a new word in	434
documentation work/Use of mechanized methods in	86
DOD user needs study/	21
Editing organic abstracts for Chemical Abstracts/	394
educational base for the information sciences and information engineering	409
(education)Digital computer organization and programming/	247
education for information science; Airlie House proceedings/Symposium on	176
Education for information science: review and orientation/	174
education/Information systems and engineering	221
education in technical information services/Continuing	269
(education)Introduction to problem solving using the Dummeatron computer(153
education/On the nature of information science and the responsibility of	385
(education)Outline and bibliography for a course in syntax/Curriculum fo	62
(education)Professional aspects of information science and technology/	408
education terms/The preparation of a thesaurus of	32
(education)The art of teaching information science/	339
(education)The literature of science and engineering[lecture notes series	350
(education)The new master of science degree in information science[docume	171
Effective cost control systems/	286
Electronic data retrieval and microfilm/	407
empiricism/The development of logical	213
encoding and searching of literary information/(retrieval)A statistical a	261
engineering/A methodology for systems	165
engineering; design and measurement of work methods/Methods	237
engineering education/Information systems and	221
engineering [lecture notes series]/(education)The literature of science a	350
engineering/On statistical methods in communication	38
engineering/System	155
engineer-scientist and an information retrieval system/The	289
error on the part of human links in communication systems/Systematic	65
(evaluation)A methodology for analysis of information systems/	196
evaluation and design/Index-abstract	103
(evaluation)Factors determining the performance of indexing systems/	83
evaluation/Indexing process	40
evaluation of indexing procedures and retrieval effectiveness/Project SHA	419
evaluation of links and roles as retrieval tools/An	89
evaluation of reference retrieval systems/(information system)Review of t	53
evaluation of retrieval systems/The	341
evaluation of scientific literature through citation indexing/New factors	147
(evaluation)Relative effectiveness of document titles and abstracting for	344
(evaluation)Report on the testing and analysis of an investigation into t	80
(evaluation)The Cranfield hypothesis/(indexing)	81
(evaluation)The testing of index language devices/	82
Faceted classification: a guide to construction and use of special schem	429
Faceted classification schemes/	430
Faceted organization of a thesaurus vocabulary/(classification)	305
filing of index, bibliographic, and catalog entries/Computer	185
Finitary models of language users/	293
Finite graphs and networks/	64
Flowcharting techniques/	200

documentation, National Bureau of Standards, Miscellaneous Publication No	392
documentation No.14, NSF 66-17/Current research and development in scient	311
documentation/The current situation in	248
documentation/Thesaurus - a new word in	434
documentation work/Use of mechanized methods in	86
DOD user needs study/	21
Editing organic abstracts for Chemical Abstracts/	394
educational base for the information sciences and information engineering	409
(education)Digital computer organization and programming/	247
education for information science; Airlie House proceedings/Symposium on	176
Education for information science: review and orientation/	174
education/Information systems and engineering	221
education in technical information services/Continuing	269
(education)Introduction to problem solving using the Dummeatron computer(153
education/On the nature of information science and the responsibility of	385
(education)Outline and bibliography for a course in syntax/Curriculum fo	62
(education)Professional aspects of information science and technology/	408
education terms/The preparation of a thesaurus of	32
(education)The art of teaching information science/	339
(education)The literature of science and engineering[lecture notes series	350
(education)The new master of science degree in information science[docume	171
Effective cost control systems/	286
Electronic data retrieval and microfilm/	407
empiricism/The development of logical	213
encoding and searching of literary information/(retrieval)A statistical a	261
engineering/A methodology for systems	165
engineering; design and measurement of work methods/Methods	237
engineering education/Information systems and	221
engineering [lecture notes series]/(education)The literature of science a	350
engineering/On statistical methods in communication	38
engineering/System	155
engineer-scientist and an information retrieval system/The	289
error on the part of human links in communication systems/Systematic	65
(evaluation)A methodology for analysis of information systems/	196
evaluation and design/Index-abstract	103
(evaluation)Factors determining the performance of indexing systems/	83
evaluation/Indexing process	40
evaluation of indexing procedures and retrieval effectiveness/Project SHA	419
evaluation of links and roles as retrieval tools/An	89
evaluation of reference retrieval systems/(information system)Review of t	53
evaluation of retrieval systems/The	341
evaluation of scientific literature through citation indexing/New factors	147
(evaluation)Relative effectiveness of document titles and abstracting for	344
(evaluation)Report on the testing and analysis of an investigation into t	80
(evaluation)The Cranfield hypothesis/(indexing)	81
(evaluation)The testing of index language devices/	82
Faceted classification: a guide to construction and use of special schem	429
Faceted classification schemes/	430
Faceted organization of a thesaurus vocabulary/(classification)	305
filing of index, bibliographic, and catalog entries/Computer	185
Finitary models of language users/	293
Finite graphs and networks/	64
Flowcharting techniques/	200

FORTTRAN IV/Computer programming	13
FORTTRAN programming/Introduction to	107
frequencies with applications to superimposed coding/Word letter	323
frequency in a specialized medical area/Dictionary buildup and stability	257
generators/Random number	194
geoastrophysical literature and the UDC schedules in these fields/Experim	348
Glossary of terms in computers and data processing/	37
government, and information/Science,	427
government/Report to President on the management of automatic data proces	418
government/Status report on scientific and technical information in the f	424
HAYSIAZ: a mechanized system for searching chemical information/	271
IBM punched card data processing/An introduction to	198
Improvements in a permuted title index/	436
Index-abstract evaluation and design/	103
index barrier - a citation index for chemical patents/Breaking the subjec	144
index, bibliographic, and catalog entries/Computer filing of	185
index concept: a retrospective view/The KWIC	125
Indexer consistency tests--origin, measurements, results, and utilization	190
indexes and abstracts prepared by humans with those in titles/An experime	232
indexes and co-ordinate indexes: an experimental comparison/Alphabetic s	161
Indexes and index mechanization in biomedicine/	452
indexes/An evaluation of abstracting journals and	388
indexes/An examination of citation	277
indexes/Correlative	39
indexes effect of question relevant document title concept correspondence	210
indexes for Chemical Abstracts/Time studies in producing subject	453
indexes/(indexing)A basic theory of roles on syntactical control devices	94
indexes/(information specialist)(user)The searchers - links between inqui	16
indexes in sociological and historical research/citation	145
indexes/New kinds of	41
indexes/State of the art of published	273
indexes/The distribution of term usages in manipulative	192
indexes to science literature through inclusion of citation relationship	253
index for technical literature/(PWIC)Keyword-in-content	262
index for technical reports/(KWIC)Keyword-in-context	205
index/Improvements in a permuted title	436
(indexing)A basic theory of roles on syntactical control devices in co-or	94
indexing-abstracting system/A combined	451
(indexing)A critical analysis of links and roles/	183
Indexing and abstracting by association/	113
indexing and subject cataloguing: alphabetical: classified: co-ordinat	291
indexing and the classified catalogue/Chain	295
indexing: an experimental inquiry/Automatic	275
indexing: a state-of-the-art report/Automatic	391
(indexing)Automatic subject recognition in scientific papers: an empiric	320
indexing by concept co-ordination using links and roles/Patent	299
indexing by manual permutation methods/Deep subject	178
indexing/Citation	298
indexing/Classificatory, alphabetical and associative schedules as aids t	384
indexing, classifying and searching/(retrieval)A classed thesaurus as an	256
indexing/Comparison of the results of bibliographic coupling and analytic	228
(indexing)Comparisons of four types of lexical indicators of content/	335
indexing/Condex: a technique for automatic sub-documentary	304

indexing/Construction and usage of classified schedules and generic feat	283
indexing/Co-ordinate	95
(indexing)(evaluation)The Cranfield hypothesis/	81
indexing headings and title words in three medical indexing systems/Corr	321
indexing in science/Classification and	428
indexing/Installation manual for the uniterm system of co-ordinate	109
indexing in the social sciences/Classification and	135
indexing language of an information retrieval system/(information system	301
indexing/Limits of	48
(indexing)Links and roles/	187
indexing methods and their testing/Mechanized	322
indexing/New concepts in	367
indexing/New factors in the evaluation of scientific literature through	147
indexing/Notes on the use of roles and links in co-ordinate	403
indexing of technical books/The	438
indexing of the psychopharmacological literature/The analysis and	458
indexing of titles with a subject heading classification/A comparison of	236
indexing/On unit terms and co-ordinate	402
indexing principles, problems and solution/Uniterm	98
Indexing problems and some of their solutions/	258
indexing procedures and retrieval effectiveness/Project SHARP(Ships Anal	419
Indexing process evaluation/	40
indexing/Relevancy and pertinency in	338
(indexing)Roles and links or forward to Cutter/(retrieval)	17
indexing scheme/A computer analysis of the Merck, Sharp and Dohme Resear	360
indexing/Science Citation Index - a new dimension in	146
indexing/Scientific and technical	84
(indexing)Some solutions to operational problems in concept co-ordinatio	96
indexing/State of the art of co-ordinate	110
(indexing)Storage and retrieval of chemical research and patent informat	97
(indexing)Subject headings: a practical guide/	172
(indexing)Subject matter analysis and coding--some fundamental considera	328
indexing system for metallurgical literature: a review of the final rep	340
indexing systems/(evaluation)Factors determining the performance of	83
indexing systems/(evaluation)Report on the testing and analysis of an in	80
indexing; technical report no.6/The mechanization of co-ordinate	111
indexing/The coming age of information technology, studies in co-ordinat	387
Indexing theory, indexing methods and search devices/	217
indexing/The state of the art of co-ordinate	212
indexing/The universal decimal classification and technical information	433
indexing/Unit concept co-ordination	437
indexing/Unit terms in co-ordinate	405
indexing, Vol.VI/Studies in co-ordinate	386
indexing vs. the scanning of their outputs/The use of subordinate and c	455
indexing with links and roles/Testing, comparison, and evaluation of re	300
index language devices/(evaluation)The testing of	82
index manipulation by an electronic computer/Five operational years of	104
index mechanization in biomedicine/Indexes and	452
index organization for information retrieval/Reference manual;	207
index production/A generalized computer method for	359
index requirements/A technique for determining	209
index/The use of a collator in an inverted file	454
induction/Abstraction, relation, and	449
inference/Techniques of deductive	242
Information/	281

Information/	363
information/A comparison of systems for selectively disseminating	389
information activities of the National Academy of Sciences - National Re	309
information among scientist/(communication)Review of studies in the flow	288
Information and communication practice in industry/	381
Information and entropy I/	56
Information and its dissemination/(petroleum)	450
information availability/Data -	90
information center administration/Technical	118
information center/Redstone scientific	417
information center/Role of one technical library in support of an	45
information centers/A comparison of the functions of libraries and	306
information centers/Directory of special libraries and	238
information centers in the United States/Scientific	380
information center/Specialized	224
(information center)The Aerospace Research Applications Center/	446
information/(communication)Semantic	31
Information computer and system design/	460
information dissemination/Adaptive	356
information dissemination by computer-based subject category assignment/	189
information engineering/Lecture notes 1E 160 -	36
information engineering/Towards an educational base for the information	409
information explosion - real or imaginary/The	158
Information handling: first principles/	193
information handling/Methods of	52
information/How to cope with	35
information/Parameters for machine handling of alphabetic	373
information II/Physical entropy &	57
information problem ahead/On the	175
information/Quantal aspects of scientific	268
information, report for 1961-1962/An organization of	9
information requirements and use patterns/Studies in the methodology of	463
Information retrieval/	296
Information retrieval/	372
information retrieval approaching a crises?/Is	28
information retrieval for historical materials/Report on project histor	461
information retrieval/General information; an introduction to	201
(information retrieval)(language)Syntol/	143
Information retrieval management/	169
information retrieval/Principles of automated	459
information retrieval/Readings in	369
information retrieval/Reference manual; index organization for	207
information retrieval research program at SDC and automatic document cl	378
information retrieval/Some fundamentals of	370
information retrieval/Subject analysis for	432
Information retrieval system/	399
information retrieval system/The engineer-scientist and an	289
information retrieval system[tracers]/A trace metals, radiobiology, and	265
information retrieval/Textbook on mechanized	225
information retrieval/Textbook on mechanized	226
information retrieval/The analysis of information systems; a programmer	287
Information retrieval thesauri/	439
(information retrieval)The science information exchange: the evolution	130
information retrieval/The thesaurus approach to	219
Information retrieval today/	379

information retrieval/Towards	121
information science, Airlie House proceedings/Symposium on education for	176
information science and technology/Annual review of	101
information science and technology/(education)Professional aspects of	408
information science and the responsibility of institutions of higher edu	385
information science [documentation]to be given by the school of library	171
information science/(education)The art of teaching	339
information/Science, government, and	427
(information science)New dimensions in library education: the training	337
information science/(proceedings)Parameters of	8
information science: review and orientation/Education for	174
information sciences and information engineering/Towards an educational	409
information sciences: a new basic discipline/The computer and	156
(information science) Science information personnel: the new profession	87
information science/Some problems in	234
information sciences, report no.5/(education)Outline and bibliography fo	62
information/Scientists' approaches to	435
information scientists/Salaries and academic training programs for	184
information searching/(computers)Electronic digital machines for high sp	25
information; selected essays on their theory and applications/Language a	29
information services/Continuing education in technical	269
Information services in libraries/	136
information services in the United States, NSF 61-68/(information system	313
information specialists/Proceedings of the conference on training scienc	149
(information specialist)(user)The searchers - links between inquirers an	16
Information storage and retrieval/	254
Information storage and retrieval: a state-of-the-art report/	42
information storage and retrieval system: evaluation of indexing proced	419
information storage and retrieval systems/(information system)Requiremen	55
information storage and retrieval/The clarification, unification and int	411
Information storage and retrieval; theory, systems, and devices/	406
Information storage and retrieval: tools, elements, theories/	34
Information system networks...Let's profit from what we know/	398
information system/Operating model of a national	116
(information system)Requirements, criteria, and measures of performance	55
(information system)Review of the criteria and techniques used or sugges	53
Information systems/	255
Information systems and engineering education/	221
information systems; a programmer's introduction to information retrieva	287
Information systems compatibility/	319
information systems/(evaluation)A methodology for analysis of	196
information systems in current use, No.4, NSF 66-24/Nonconventional scie	312
information systems in current use/Non-conventional technical	426
(information systems)Specialized science information services in the Uni	313
(information system)The indexing language of an information retrieval sy	301
(information system)The M.I.T. technical information project/	229
information system theory/On retrieval	431
information system/Toward national technical	191
information technology, studies in co-ordinate indexing/The coming age o	387
Information theory/	18
Information theory/	72
information theory/An examination of	27
information theory/An introduction to	345
information theory, language and cybernetics/Great ideas in	382
information/The transmission of	122

information transfer experiments/Intrex: report of a planning conference	325
information with the aid of electronic processing equipment/(computer)Se	263
interagency co-ordination/Summary of activities toward	421
interest profile for ASCA/How to submit your	197
Intrex: report of a planning conference on information transfer experim	325
inverted file index/The use of a collator in an	454
journal publication/Economics of	240
(journals)Computers and scientific periodicals/	239
journals/Tests on abstracting	279
Keypunching/	166
Keysort punching and sorting manual/	351
keyword from title indexes effect of question relevant document title co	210
Keyword-in-content index for technical literature/(KWIC)	262
Keyword-in-context index for technical reports/(KWIC)	205
keywords found in indexes and abstracts prepared by humans with those in	232
knowledge: its scope and limits/Human	352
KWIC index concept: a retrospective view/The	125
KWIC indexing of titles with a subject heading classification/A comparis	236
(KWIC)Keyword-in-content index for technical literature/	262
(KWIC)Keyword-in-context index for technical reports/	205
(KWIC)Recall with keyword from title indexes effect of question relevant	210
language and cybernetics/Great ideas in information theory,	382
Language and information: selected essays on their theory and applicati	29
Language and learning/	119
Language and thought/	67
language/A programming	208
language devices/(evaluation)The testing of index	82
language/New directions in the study of	246
language of taxonomy/The	159
language/Philosophy of	4
language processing/Automatic	173
language processing: the state of the art/Automatic	49
language research/Mechanical translation and related	365
languages/Mathematical theory of context - free	151
languages of sciences/The	243
(language)Syntol/(information retrieval)	143
language/The philosophy of	222
language/The structure and psychology of	43
language/The structure of	134
language users/Finitary models of	293
large-scale systems/(computer)System engineering; an introduction to the	154
learning/Concept	195
learning/Language and	119
learning/Perceptual-motor skill	129
learning theory/Stochastic	390
Lectures on communication theory/	141
Length of an abstract and amount of information/	186
lexical indicators of content/(indexing)Comparisons of four types of	335
librarian and the machine/The	441
Librarians against machines/	374
librarianship and foreign language/(information science)Science informat	87
Libraries and automation/	274

libraries and information centers/A comparison of the functions of	306
libraries and information centers/Directory of special	238
Libraries and the organization of knowledge/	376
libraries/Closing the circuit: automation and data processing for	78
libraries/Data processing in public and university	168
libraries/Information services in	136
Libraries of the future/	251
libraries/Organizing knowledge in	314
libraries/Science, humanism and	137
libraries: their organization and administration/Scientific and technic	395
library/A checklist for the organization, operation and evaluation of a	126
library/Advanced data processing in the university	358
Library applications of punched cards: a description of mechanical syst	326
library automation with data processing equipment/A total systems approa	235
library cataloging and classification/An introduction to	106
library classification/Elements of	333
library co-operation of the future/Mechanization and international	401
library education: the training of science information personnel/(infor	337
library file: technical report no.10/Application of the uniterm system	108
library in support of an information center/Role of one technical	45
Library mechanization symposium, Endicott, New York, May 25,1964/	206
Library of Congress/Automation and the	230
library operations/Scientific management of	112
library procedures/General information manual: mechanized	202
library/Science, technology, and the	3
library/Some user requirements stated quantitatively in terms of the 90	54
library system/A cost analysis and utilization study of the Stanford Uni	105
library/The future of the research	79
library: the role of the computer in the organization and handling of i	99
Limits of indexing/	48
Linguistic aspects of science/	44
linguistic descriptions/An integrated theory of	223
linguistics/An introduction to descriptive	152
linguistic theory/Current issues in	76
links and roles as retrieval tools/An evaluation of	89
Links and roles/(indexing)	187
links and roles/(indexing)A critical analysis of	183
links and roles in Dupont/(indexing)Storage and retrieval of chemical re	97
links and roles/Patent indexing by concept co-ordination using	299
links and roles/Testing, comparison, and evaluation of recall, relevance	300
links in co-ordinate indexing/Notes on the use of roles and	403
links or forward to Cutter/(retrieval)(indexing)Roles and	17
LISP 1.5 programmer's manual/	282
literary style/The computer and	244
literature/Comprehensive dissemination of current	355
literature searchers/Semantic road maps for	114
literature searching/Some theoretical aspects of the mechanization of	30
literature/Searching the chemical	5
logical empiricism/The development of	213
logic and scientific method/An introduction to	88
logic, boolean algebra, and computers/Thinking machines; a layman's intr	1
Logic, computing machines, and automation/(computers)	182
Logic, methodology and philosophy of science/	307
logic/Methods of	332
logic/Symbolic	93
logic/Symbolic	128

machine handling of alphabetic information/Parameters for	373
machines/Librarians against	374
machines: selected papers/Sequential	302
machine/The imitation of man by	315
machine/The librarian and the	441
Management accounting principles/	14
management/Information retrieval	169
management of automatic data processing on the Federal government/Report	418
management of library operations/Scientific	112
man by machine/The imitation of	315
mathematical model for group structures/A	26
mathematical psychology/Handbook of	259
mathematical psychology/Readings in	260
mathematical theory of communication/The	368
Mathematical theory of context - free languages/	151
mathematics/The world of	318
mathematique des jeux de communication/Contribution a la theorie	270
measuring information requirements and use patterns/Studies in the metho	463
mechanical/Information indexing and subject cataloging: alphabetical:	291
mechanical systems/Library applications of punched cards: a description	326
Mechanical translation and related language research/	365
Mechanization and international library co-operation of the future/	401
mechanization of co-ordinate indexing; technical report no.6/The	111
mechanization of literature searching/Some theoretical aspects of the	30
mechanization symposium, Endicott, New York, May 25,1964/Library	206
mechanized control of meteorological and geostrophysical literature and	348
mechanized documentation, National Bureau of Standards, Miscellaneous Pu	392
mechanized encoding and searching of literary information/(retrieval)A s	261
Mechanized indexing methods and their testing/	322
mechanized information retrieval/Textbook on	225
mechanized information retrieval/Textbook on	226
mechanized library procedures/General information manual:	202
mechanized methods in documentation work/Use of	86
mechanized system for searching chemical information/HAYSIAZ: a	271
medical centers/Some plain facts about computer-oriented programs in	354
medical indexing systems/Correlation of indexing headings and title word	321
MEDLARS system/The	22
metallurgical literature: a review of the final report/The Aslib-Cranfi	340
meteorological and geostrophysical literature and the UDC schedules in	348
methodology and philosophy of science/Logic,	307
Methods engineering; design and measurement of work methods/	237
Methods of information handling/	52
microfilm/Electronic data retrieval and	407
microfilm systems/Introduction to	231
Microfilm technology/	316
Microprinting fills the bill; Federal Clearinghouse uses the systems app	140
mind/The concept of	353
M.I.T. technical information project/(information system)The	229
model/(communication)On psychophysiological	252
model/Data flow: the general problem and cognitive	11
model for data systems analysis/A simulation	142
model for group structures/A mathematical	26
model of a national information system/Operating	116
models for retrieval system design/Two	181
models of language users/Finitary	293
models/Systems analysis, a computer approach to decision	285

2001
ED
016498

Monte Carlo methods/Symposium on	292
National document-handling systems for science and technology/	68
national document handling systems in science and technology/Recommenda-	423
national information system/Operating model of a	116
national technical information system/Toward	191
Natural language processing and information retrieval research program a	378
natural language text by computer/Searching	397
networks/Finite graphs and	64
networks...Let's profit from what we know/Information system	398
Non-conventional technical information systems in current use/	426
Notation systems as applied to organic chemistry/	117
Notched cards/	342
number generators/Random	194
numerical analysis/Elementary	91
On-line computing: time shared man-computer system/	220
optic-coincidence system of information retrieval for historical materia	461
organic abstracts for Chemical Abstracts/Editing	394
organization man/The	456
organization of information, report for 1961-1962/An	9
organization of knowledge/Documentation and the	375
organization of knowledge/Libraries and the	376
Pattern recognition/	414
patterns of common works as discriminators subject content in scientific	440
perception/Computer simulation and psychological theories of	163
perception/Decision processes in	400
Perceptual-motor skill learning/	129
performance of indexing system/(evaluation)Factors determining the	83
performance of information storage and retrieval systems/(information sy	55
permuted title index/Improvements in a	436
personnel/(information science)New dimensions in library education: the	337
personnel: the new profession of information combining science, librari	87
pertinency in indexing/Relevancy and	338
(petroleum)Information and its dissemination/	450
petroleum literature and patents/Centralized abstracting of	377
Philosophy of language/	4
philosophy of language/The	222
philosophy of science/Logic, methodology and	307
Physics abstracting - use and users	416
physics abstracts - abstracting three types of journals/Study of	20
PL-1 programming primer/	448
principles/Management accounting	14
Principles of automated information retrieval/	459
printed word/The	327
printing/Microprinting fills the bill; Federal Clearinghouse uses the sy	140
problems and some of their solutions/Indexing	258
problem solving using the Dummeatron computer(lecture notes series), Sch	153
Proceedings of the Second International Study Conference on Classificati	19
(proceedings)Parameters of information science/	8
processing systems/Introduction to IBM data	204
profile for ASCA/How to submit your interest	197
programmer's introduction to information retrieval/The analysis of infor	287
programmer's manual/LISP 1.5	282

Programming business computers/	284
programming/Computer	132
programming/(education)Digital computer organization and	247
programming FORTRAN IV/Computer	13
programming fundamentals/Computer	245
programming handbook, a guide for beginner/Computer	308
programming/Introduction to FORTRAN	107
programming language/A	208
programming primer/PL-1	448
programming systems/Computer	127
Programming the IBM System-360/	324
Project SHARP(Ships Analysis and Retrieval Project)information storage a	419
psychological theories of perception/Computer simulation and	163
psychology/Handbook of mathematical	259
psychology of language/The structure and	43
(psychology)Plans and the structure of behavior/	294
psychology/Readings in mathematical	260
psychopharmacological literature/The analysis and indexing of the	458
psychophysics/Problems and methods of	393
psychophysiological models/(communication)On	252
publication/Economics of journal	240
publishing abstracts/Style and speed	249
publishing/State of the art of computers in commercial	272
Punch-card methods in research and documentation/(biology)	362
punched card data processing/An introduction to IBM	198
punched cards: a description of mechanical systems/Library applications	326
(punched cards)Holes, punches, notches, slots, and logic/	162
Punched cards: their applications to science and industry/	70
punching and sorting manual/Keysort	351
Quantal aspects of scientific information/	268
radiobiology, and cancer information retrieval system[tracers]/A trace m	265
Random number generators/	194
Rank order patterns of common works as discriminators subject content in	440
reader reaction to abstract-bulletin style/Some	442
recall, relevance, and cost of co-ordinate indexing with links and roles	300
Redstone scientific information center/	417
relation, and induction/Abstraction,	449
relationship indicators/Improvement of the selectivity of citation index	253
relevance, and cost of co-ordinate indexing with links and roles/Testing	300
relevance of documents/(evaluation)Relative effectiveness of document ti	344
Relevancy and pertinency in indexing/	338
relevant document title concept correspondence/(KWIC)Recall with keyword	210
requirements and use patterns/Studies in the methodology of measuring in	463
research library/The future of the	79
(retrieval)A classed thesaurus as an aid to indexing, classifying and se	256
retrieval and microfilm/Electronic data	407
retrieval: a state-of-the-art report/Information storage and	42
(retrieval)A statistical approach to mechanized encoding and searching o	261
retrieval/Automatic fact	92
(retrieval)(indexing)Roles and links or forward to Cutter/	17
retrieval/Information	372
retrieval/Information storage and	254
retrieval information system theory/On	431

retrieval of chemical research and patent information by links and roles	97
retrieval of ideas by means of the association of ideas/Storage and	404
retrieval/Second order description for document	250
retrieval system design/Two models for	181
retrieval system: evaluation of indexing procedures and retrieval effec	419
retrieval system/Information	399
retrieval systems/(information system)Requirements, criteria, and measur	55
retrieval systems/(information system)Review of the criteria and techniq	53
retrieval systems/The evaluation of	341
retrieval system/The engineer-scientist and an information	289
retrieval; tests and demonstrations of an optic-coincidence system of in	461
retrieval/The clarification, unification and integration of information	411
retrieval; theory, systems, and devices/Information storage and	406
retrieval/The thesaurus approach to information	219
retrieval today/Information	379
retrieval tools/An evaluation of links and roles as	89
retrieval: tools elements, theories/Information storage and	34
roles and links in co-ordinate indexing/Notes on the use of	403
Roles and links or forward to Cutter/(retrieval)(indexing)	17
roles as retrieval tools/An evaluation of links and	89
roles/(indexing)A critical analysis of links and	183
roles/(indexing)Links and	187
roles in Dupont/(indexing)Storage and retrieval of chemical research and	97
roles on syntactical control devices in co-ordinate indexes/(indexing)A	94
roles/Patent indexing by concept co-ordination using links and	299
roles/Testing, comparison, and evaluation of recall, relevance, and cost	300
Salaries and academic training programs for information scientists/	184
scanning of their outputs/The use of subordinate and co-ordinate indexin	455
schedules and generic features in co-ordinate indexing/Construction and	283
Schedules as aids to co-ordinate indexing/Classificatory, alphabetical a	384
science and engineering[lecture notes series]/(education)The literature	350
science and technology/National document-handling systems for	68
science and technology/Recommendations for national document handling sy	423
science/Bibliography in an age of	347
science/Classification and indexing in	428
science/Fundamentals of concept formation in empirical	177
Science, government, and information/	427
Science, humanism and libraries/	137
science information exchange: the evolution of a unique information sto	130
Science information personnel: the new profession of information combin	87
science/Linguistic aspects of	44
science literature through inclusion of citation relationship indicators	253
science/Logic, methodology and philosophy of	307
sciences/The language of	243
Science, technology, and the library/	3
scientific and technical documentation, No.14, NSF 66-17/Current researc	311
scientific and technical information/Federal funds for	425
scientific and technical information in the federal government/Status re	424
scientific and technical information systems in current use, No.4, NSF 6	312
Scientific and technical libraries: their organization and administrati	395
Scientific communication/	447
Scientific information activities of the National Academy of Sciences ~	309
Scientific information centers in the United States/	380
scientific information/Quantal aspects of	268

scientific method/An introduction to logic and	88
scientist and an information retrieval system/The engineer-	289
Scientists' approaches to information/	435
scientists/(communication)Review of studies in the flow of information am	288
scientists/Salaries and academic training programs for information	184
search devices/Indexing theory, indexing methods and	217
searchers - links between inquirers and indexes/(information specialist)(16
Searching natural language text by computers	397
Searching the chemical literature/	5
search/Narrowing the	349
Secondary journals in chemical and biological fields/(abstracting)	280
Second order description for document retrieval/	250
selective dissemination of information/General information manual -	203
Selective dissemination of new scientific information with the aid of el	263
Selective information dissemination by computer-based subject category a	189
selectively disseminating information/A comparison of systems for	389
Semantic analysis/	267
semantic classification/Synonymy and	214
Semantic information/(communication)	31
Semantic road maps for literature searchers/	114
Semantics: an introduction to the science of meaning/	415
semantics/Introduction to	357
sentences/The formation of abstracts by the selection of	336
Sequential Machines: selected papers/	302
service for specific areas of high current interest: a preliminary repo	303
services in the United States, NSF 61-68/(information systems)Specialize	313
simulation and psychological theories of perception/Computer	163
Simulation: a survey/	167
simulation model for data systems analysis/A	142
simulation/The art of	410
social sciences/Classification and indexing in the	135
software/Computer	133
sorting manual/Keysort punching and	351
speech analysis/Preliminaries to	211
Statistical association methods for mechanized documentation, National B	392
statistical methods in communication engineering/On	38
(statistic)Rank order patterns of common works as discriminators subject	440
Stochastic learning theory/	390
Storage and retrieval of ideas by means of the association of ideas/	404
structure and psychology of language/The	43
structure of language/The	134
structures/A mathematical model for group	26
Style and speed in publishing abstracts/	249
Subject analysis for information retrieval/	432
Subject catalogs/	85
subject category assignment/Selective information dissemination by compu	189
subject heading classification/A comparison of KWIC indexing of titles w	236
Subject headings: a practical guide/(indexing)	172
subject headings/List of	364
subject index barrier - a citation index for chemical patents/Breaking th	144
subject indexes and co-ordinate indexes: an experimental comparison/Alph	161
subject indexes for Chemical Abstracts/Time studies in producing	453
subject indexing by manual permutation methods/Deep	178
subject indexing/Comparison of the results of bibliographic coupling and	228
subject indication of information/(classification)Alphabetical	290

Subject matter analysis and coding--some fundamental considerations/(ind.	328
Subject slanting in scientific abstracting publications/	179
subordinate and co-ordinate indexing vs. the scanning of their outputs/T	455
Symbolic logic/	93
Symbolic logic/	128
Symbolic shorthand system/	366
Symbols, signals, and noise; the nature of communication	329
Synonymy and semantic classification/	214
Syntactic structures/	77
syntax/Aspects of the theory of	76
syntax. Curriculum for the information sciences, report no.5./(education	62
Syntol/(information retrieval)(language)	143
Systematic errors on the part of human links in communication systems/	65
System design for computer applications/	241
system design/Information computer and	460
System engineering/	155
System engineering; an introduction to the design of large-scale systems	154
system for searching chemical information/HAYSIAZ: a mechanized	271
system/Planning a computer	63
System-360/Programming the IBM	324
Systems analysis, a computer approach to decision models/	285
Systems analysis for effective administration/	33
systems approach to library automation with data processing equipment/A	235
systems/(computer)System engineering; an introduction to the design of 1	154
systems/Data processing	317
systems/Effective cost control	286
systems engineering/A methodology for	165
systems/(evaluation)A methodology for analysis of information	196
systems for science and technology/National document-handling	68
systems/The evaluation of retrieval	341
system study guide/Basic	199
system/The engineer-scientist and an information retrieval	289
system/Toward national technical information	191
taxonomy/The language of	159
teaching information science/(education)The art of	339
teaching/The art of	180
Teaching the pursuit of science/	462
Technical-abstracting fundamentals/	443
Technical-abstracting fundamentals/	444
Technical-abstracting fundamentals/	445
technical books/The indexing of	438
technical library in support of an information center/Role of one	45
technical literature/(KWIC)Keyword-in-content index for	262
technical reports/(KWIC)Keyword-in-context index for	205
termatrix inverted 'punched level' systems/The	218
termatrix reports/Miscellaneous	216
term usages in manipulative indexes/The distribution of	192
thesauri/Information retrieval	439
Thesaurus - a new word in documentation/	434
thesaurus approach to information retrieval/The	219
thesaurus as an aid to indexing, classifying and searching/(retrieval)A	256
Thesaurus code manual (ASTIA)/	15
(thesaurus)Construction of authority files/	343
thesaurus/Development of a technical	188

Thesaurus for literature analysis in a cancer research institution	266
Thesaurus of DDC descriptors/	422
thesaurus of education terms/The preparation of a	32
Thesaurus rules and conventions/	120
thesaurus vocabulary/(classification)Faceted organization of a	305
time shared man-computer system/On-line computing.	220
Time-sharing on computers/	123
Time studies in producing subject indexes for Chemical Abstracts/	453
titles and abstracting for determining relevance of documents/(evaluatio	344
training of Chemical Abstracts Service/On-the-job	100
training of science information personnel/(information science)New dimen	337
training programs for information scientists/Salaries and academic	184
training science information specialists/Proceedings of the conference o	149
Training the scientific information officer/	2
translation and related language research/Mechanical	365
transmission of information/The	122
UDC schedules in these fields/Experiments in mechanized control of meteo	348
Unit concept co-ordination indexing/	437
Uniterm indexing principles, problems, and solution/	98
uniterm system and the association of ideas to a special library file:	108
uniterm system of co-ordinate indexing/Installation manual for the	109
unit terms and co-ordinate indexing/On	402
Unit terms in co-ordinate indexing/	405
Universal Decimal Classification and technical information indexing/	433
Universal Decimal Classification/Guide to the	58
Universal Decimal Classification/The	297
use patterns/Studies in the methodology of measuring information require	463
user needs study/DOD	21
user requirements stated quantitatively in terms of the 90 percent libra	54
users/Physics abstracting - use and	416
(user)The searchers - links between inquirers and indexes/(information s	16
utilization study of the Stanford University library system/A cost analy	105
word frequency in a specialized medical area/Dictionary buildup and stab	257
words/How to do things with	23
word/The printed	327

V. RESPONDENTS

American University
Center for Technology and Administration
Washington, D. C., 20006

University of California at Berkeley
School of Librarianship
Berkeley, California, 94704

University of California at Los Angeles
School of Library Service
Los Angeles, California, 90024

California Institute of Technology
Willis H. Booth Computing Center
Pasadena, California, 91109

Carnegie Institute of Technology
Program in the Systems and Communication Sciences
Pittsburgh, Pennsylvania, 15213

Catholic University of America
School of Library Science
Washington, D. C.

University of Chicago
Graduate Library School
Chicago, Illinois, 60637

Columbia University
School of Library Service
New York, New York, 10027

University of Dayton
Department of Psychology
Dayton, Ohio, 45409

University of Denver
School of Library Science
Denver, Colorado, 80210

Drexel Institute of Technology
Graduate School of Library Science
Philadelphia, Pennsylvania, 19104

Emory University
Division of Librarianship
Atlanta, Georgia, 30314

Florida State University
Library School
Tallahassee, Florida, 32306

Georgia Institute of Technology
School of Information Science
Atlanta, Georgia, 30332

University of Illinois
Graduate School of Library Science
Urbana, Illinois

Illinois Institute of Technology
Science Information Research
Chicago, Illinois, 60616

Indiana University
Division of Library Science
Bloomington, Indiana, 47405

Kent State University
School of Library Science
Kent, Ohio, 44240

Lehigh University
Center for the Information Sciences
Bethlehem, Pennsylvania, 18015

University of Maryland
School of Library and Information Services
College Park, Maryland, 20740

University of Michigan
Program in Communication Science
Ann Arbor, Michigan, 48104

University of North Carolina
Department of Information Science
Chapel Hill, North Carolina, 27515

The Ohio State University
Division of Information Science
422 Caldwell Laboratory
Columbus, Ohio, 43210

University of Oklahoma
School of Library Science
Norman, Oklahoma

University of Pennsylvania
Moore School of Electrical Engineering
Philadelphia, Pennsylvania, 19104

University of Pittsburgh
Graduate School of Library and Information Sciences
Pittsburgh, Pennsylvania, 15213

Pratt Institute
School of Library Science
Brooklyn, New York, 11205

Rutgers, The State University
Graduate School of Library Service
New Brunswick, New Jersey, 08903

University of Southern California
School of Library Science
Los Angeles, California, 90007

Syracuse University
School of Library Science
Syracuse, New York, 13210

Western Michigan University
School of Library Science
Kalamazoo, Michigan, 49001

Western Reserve University
School of Library Service
Cleveland, Ohio

University of Wisconsin
Computer Science Department
Madison, Wisconsin

University of Wisconsin, Milwaukee
School of Library and Information Science
Chapman Hall
Milwaukee, Wisconsin, 53201